

Original Correspondence.

ON EXPLOSIONS IN COAL MINES.

SIR.—I observe in the Journal of last week a rather lengthy notice of an invention provisionally specified by Mr. H. P. Ribton, C.E., of Dublin, for lighting mines and preventing explosions. About 12 or 13 years ago, on one of these fearful events occurring at Barnsley, and by which nearly 100 lives were sacrificed, my attention was very closely turned to the subject, and I then carefully elaborated a scheme for preventing these awfully destructive accidents. I am not aware now that I was preceded in this discovery, or invention shall I name it; but this is at least the second, if not the third, discoverer or inventor who has succeeded me, and as he has also provisionally secured the invention, I think it is only justice to him as well as to myself to bring again before the public what I had done in the matter. I have not at the moment the dates by me, but probably in 1848 to 1850 I read a paper before the Manchester Literary and Philosophical Society fully describing my invention, which was as follows:—I proposed to manufacture coal gas at the surface of the coal mine to convey it underground in a main down the shaft, and distribute it by pipes with flexible joints to the various points required, to convey atmospheric air from the surface by another main and service-pipe, and to convey all the results of combustion by branch pipes and a third main to the surface of the pit. My lamps were to be completely insulated from the atmosphere of the pit, and I think my mode of providing for breaking of the lamps was quite as ingenious as that of Mr. Ribton. I proposed not to force my coal gas by pressure down into the pit, but to draw it down by the upward draught given by the ascension of the gases resulting from the combustion, and if that was not sufficient to increase that draught at the surface; by this means the light would only be supplied, and burn while the lamp was hermetically sealed, the least fracture by withdrawing the pressure or draught would instantly put out the light. I provided also by light valves for such breakage of one lamp only extinguishing itself, and having no effect on the others.

In an ample discussion on my scheme, I had the pleasure of having the decided opinion of Mr. William Fairbairn, a very high authority, that the scheme was perfectly capable of being wrought out, and that it was only a matter of expense. Fortified by this, through the kind assistance of the late Mr. Joseph Brotherton, I presented the matter to the Home Office, offering, in the interests of humanity solely, what I could afford of time and attention to put the scheme into practice. I got many thanks, but little encouragement. Some time afterwards a committee of the House of Lords was appointed to investigate and report on the subject of Explosions in Coal Mines. I corresponded with the Chairman, the late Lord Wharncliffe, and from him had the opinion, with which I did not materially differ, that a Committee of the House of Lords was one of the worst tribunals before which to bring a matter purely theoretical, and founded on scientific principles.

I made a third attempt, but equally an unsuccessful one, to get the matter investigated. If Mr. Ribton be more successful no one will rejoice more than I shall; but if he is to be so by making it a patented affair, which I certainly never contemplated, he had better restrict his claim to those details in which he may differ from my scheme; and these I shall be glad to afford him the means of ascertaining, by sending him a copy of my original paper on the subject.

PETER SPENCE.

Newton Heath, Manchester, Oct. 9.

PRACTICAL PAPERS ON COLLIERY OPERATIONS.

SIR.—I feel that I should not be performing my duty to the gentlemen who have so kindly written to me, suggesting the propriety of revising and republishing the articles contributed by me to your valuable paper in some permanent form, were I not to offer my warmest thanks to all who have taken such an interest in them, and to say that I have it under consideration to further contribute to the *Mining Journal* as opportunity offers, and that I will keep in view the object of having the whole revised and republished in a neat and permanent form.

JOS. GOODWIN.

COLLIERY WORKING IN LANCASHIRE.

SIR.—In reference to the enquiries as to the cheapest and most expeditious mode of raising ore or minerals from a great depth, I may say that there is no mining locality which I have ever visited but one and all pertinaciously, and with the greatest prejudice, carry out the principles their forefathers adopted, only with such necessary improvements as from time to time may occur. As to the 1s. 4d. per ton to be paid for raising (say) coal to grass, this would be quite out of the question in many places in Lancashire: taking the three samples of coal produced from one mine, sold on the mouth of the pit, would not in many mines be worth more than 4s. 6d. to 5s. 6d., some even less, perhaps some a little more. Now, in this part of the country I have never heard any complaints as to the expense of raising their minerals; should it be 50 or 340 fathoms, the expense is little different, save that of a larger engine and a larger amount of fixings; this done, modern appliances and speed do the rest. The question of hempen ropes and all the rest of it has long since been settled; except at some works, still in infancy, wire-ropes are preferred for perpendicular shafts, strong endless chains for inclines, where there is much friction. I will give one or more cases in point for your information. Understand, the coal mines do not all lay flat; I have worked in mines where the dip of the mine has been 2 ft. in 1 yard, or 4 ft. per fin. I may say in these mines perpendicular shafts are only of secondary consideration. I have seen the shafts of some of these mines sunk on the dip for 200 to 300 fms., and worked by an endless chain of considerable strength, carrying a working load of at least 7 tons. Now, with a 16-horse engine, engineer, two men to land the wagons, and one to hook the wagons on to the chain, I have seen them land more than 300 tons daily, besides a great amount of deads; the labour cost of all this would not amount to more than 13s. In working out the details of these mines, necessity has pointed out that in many instances they can be worked out to bear competition with the perpendicular shafts: the rule here is to sink a perpendicular shaft, after clearing the mine from all the coal that lays above the water level, then to follow the course, or rather dip, of the mine, to 200 or 300 fms., by placing an engine at the bottom of the shaft, to work an endless chain, the minerals afterwards to be raised to grass by a perpendicular shaft. The description already given may seem rather tedious in detail to those unacquainted with the subject, but where large quantities of mineral have to be raised, the expense per ton, once set to work, is of no consideration. We are not dead to the importance of saving fuel here, though it is of little importance, as the cost of coal here is very little. There is another mode of raising minerals in this country, and that is by the aid of water, adapted as a balance where ever there is an adit. A small amount of water will, when properly adjusted, answer every purpose of winding. I have an interest in one or two mines in Devon, which I visited lately, and was rather surprised to find that we were much in advance of them in raising our minerals both as to speed and expense. Should any mining captain, either in Devon or Cornwall, call on me, I will at any time make it my business to introduce him personally to some of the best-regulated establishments as regards the principle of winding.—*Bedford-st., Hulme, Manchester.* T. COWSELL.

HORSE TRAMWAYS.

SIR.—It appears matter for surprise that horse tramways do not make rapid progress in this country. It is quite fashionable now to sneer about the strong prejudice which had to be overcome when locomotive railways were first introduced, but the prejudice existing against the introduction of horse tramways is equally strong and absurd. The only difficulty appears to be that a tolerably level road be found, so that the horse tramroad shall be laid upon or alongside the present cart roads, either in the route between considerable cities, or as a sort of trunk line through large cities. Now, looking at the town of Newcastle-on-Tyne—the metropolis of the North—if we take the river line or quay, speaking roughly, we have from two to three miles of road pretty level, where the tramway could easily be adopted. The traffic along this route is very heavy, and, of course, large numbers of horses are employed. The noise caused by wagons passing over the rough pavement is most deafening. The economy that would result here from the adoption of a tramroad would be very great, and the general improvement enormous. One horse would, no doubt, perform the work that three or four perform at present. But it is objected that this would not pay unless main routes can also be got through the centres of Newcastle to the north and Gateshead to the south, and that the rapid rise of the ground in both directions precludes the possibility of this. I, however, venture to suggest that this objection might be overcome by adopting a vertical hoist at the end of the High Level Bridge, which would be the centre of the routes east and west and also north and south, and thus a

level route, or nearly so, would be secured in both directions. The hoist or winding apparatus, would, of course, have to be on a gigantic scale, and might, as well as the carriages on the routes, be adapted for the conveyance of passengers as well as goods. The carriages, goods, &c., could be hoisted by means of a cage exactly in the same way as we raise coal from the mine, the carriage being run in this cage without removing the load. I have thus roughly sketched the outline of my plan, how far it may be feasible I leave to the public to judge. MINING ENGINEER.

GUN-METAL.

SIR.—By the kind permission of Mr. Fairbairn I am enabled to lay before the public the result of some experiments made by that gentleman upon the tensile strength of our gun-metal, prepared from various descriptions of British iron. These experiments indicate that the Forest of Dean iron still retains its character of pre-eminent excellence, beyond that of any other brand manufactured in the kingdom. The highest tensile strain has been obtained when No. 1 Cinderford grey pig-iron was employed in the manufacture of the gun-metal. This iron is manufactured at the Cinderford Ironworks, Forest of Dean, by Messrs. Allaway and Crawshay.—*Coleford, Oct. 7.*

ROBERT MUSHET.

Manchester, Sept. 18.—DEAR SIR: An opportunity has at length occurred of testing the specimens of gun-metal which you forwarded some months ago. The results show an exceedingly high, indeed almost unprecedented, tenacity. The whole of the specimens were reduced for a length of about 6 inches to a diameter of 0'625 inches, or to a sectional area of 0'3068 sq. inches. Thus prepared, without having been heated or forged, they were placed in shackles, and their tensile strength ascertained by dead pressure:

Mark	Weight on bar.	Weight laid on in lbs.	Weight per square inch of section.	Elongation per unit of length.
8	1	19'150	—	·000
"	2	27'550	—	·020
"	3	35'950	—	·037
"	4	42'670	139'080	62'100
5B	1	19'150	—	·000
"	2	27'550	—	·012
"	3	35'950	—	·025
"	4	44'350	—	·052
"	5	45'865	149'490	66'738
5A	1	19'150	—	·002
"	2	27'550	—	·007
"	3	35'950	—	·019
"	4	44'350	—	·030
"	5	49'224	160'540	71'671
D	1	19'150	—	·002
"	2	27'550	—	·012
"	3	35'950	—	·027
"	4	40'990	133'610	59'645
M	1	19'150	—	·005
"	2	27'550	—	·015
"	3	35'950	117'180	52'311
N	1	19'150	—	·002
"	2	27'550	—	·012
"	3	35'950	—	·040
"	4	41'380	136'340	60'867
P	1	27'550	—	·019
"	2	35'950	—	·040
"	3	39'310	128'130	57'201
R	1	19'150	—	·000
"	2	27'550	—	·032
"	3	33'430	108'970	48'645
U	1	19'150	—	·003
"	2	27'550	—	·015
"	3	35'950	—	·030
"	4	44'350	144'560	64'535
4Z	1	27'550	—	·007
"	2	39'130	—	·022
"	3	44'350	—	·032
"	4	47'710	155'510	69'424
Mean.....			61'314	·072

Placing these results together in one table, we get the following summary:

Mark	Breaking weight per square inch.	Elongation per unit of length.
Iron	8 139'080	62'100 ·078
Cleator No. 2	5B 149'490	66'738 ·054
Cinderford No. 1....	5A 160'540	71'671 ·030
D	133'610	59'645 ·035
M	117'180	52'311 ·021
P	128'130	57'201 ·026
R	108'970	48'645 ·190
Cleator No. 3	144'560	64'535 ·077
Cleator No. 1	155'510	69'424 ·055
Mean.....		

The metal indicated by its fracture that the structure of the various bars was different, in some approaching the bright granular fracture of steel, and the others being more iron-grained, although the grain was very fine. The stately bars elongated least; and generally the bars having the highest tensile elongated least; but this rule is not without exceptions.—*Robert Mushet, Esq.*

ASSOCIATION OF BRITISH INVENTORS.

SIR.—The importance of the subject will, I trust, be a sufficient excuse for my offering a few remarks through the Journal to inventors and others, on the necessity of an association being formed to protect patent property. There can be no doubt that most strenuous efforts will be made during the next session of Parliament to effect serious alterations in the laws relating to patents. What the contemplated alterations may amount to yet remain to be ascertained. Judging, however, from the animosity shown by those interested in the abrogation of patents, it is evident that even supposing a total repeal of the present system will not be attempted, yet undoubtedly determined efforts will be made to inflict injustice, and to impede, as far as can possibly be done, the granting of patents for the future. Inventors should, therefore, be on their guard, and prepare themselves to resist the worst efforts of their opponents.

With this view I submit that it would be greatly to the interest of inventors to unite and act in concert for their mutual advantage; other bodies have much increased their efficiency and usefulness by that course. Barristers, solicitors, and others, for example, are represented by powerful associations of this kind, and why should not inventors and those interested in patent property (a body quite as numerous and, perhaps, as equally influential as any other) be represented in the same manner? Such an association would not only act as an efficient check upon any unfair encroachments which by legislative enactments might be attempted upon patent property, but would also afford an ample guarantee that the rights of its members would in all cases be taken care of. In conclusion, I would draw the attention of your readers to the fact, that an Association of Inventors is now being formed; and, permit me to add, that we shall be glad to receive the co-operation of all who are interested in the preservation of patent property.

A MEMBER OF THE PROPOSED ASSOCIATION.

GOLD IN WALES.

SIR.—In my letter to you, in last week's Journal, I did not mention coming across certain buildings called the Cambrian Gold Company's works, near Dolgelly. Nevertheless, I have no hesitation in stating I do not believe the projector of the said machinery ever previously saw a gold-washing concern at work, if so the incline, or check-boards, to return the golden deposits would never have been so unscientifically constructed as they were there, since it is impossible to collect by such unskillful treatment the finer portion of the golden atoms after they have left the stamping trough to be distributed over the said descending platform, whether covered with rough skins or what not, and retain all the golden freight as the compound passes over it; for instead of collecting all the auriferous spangles the most minute would be washed by the force of the waste water many fathoms beyond any mechanical line of detention, simply because the face and angle of the debris plane were not made as they ought to be to enable the said machinery to reap all the benefits such paraphernalia was intended to perform on crushed quartz, &c. I have often made and used gold-washing cradles both in California and Australia, where the slanting catch-boards were kept in constant motion to certain declinations, proportioned to the quantity of debris and supply of water operating upon it, as the rubbish passed over the check-boards, &c., hence the main object to learn was the proper angle of declination, the ratio of the lateral motion, and proper height of the check-boards, or retaining ledges, to restrain the dense particles from being washed away. Consequently, unless new chums first see some practical gold-washer using his cradle, it is ten to one the tyro loses all those fine particles of precious dust older hands would accumulate. Nevertheless, check-boards, or rough skins, can only catch dense substances, and not gold after being chopped or flattened to light gossamer filaments by the action of heavy runners, crushing both quartz and metal to a commingled impalpable powder, or else abrading the soft metal in proportion to its impingement with the surfaces of hard stone rubbing the mechanical process employed engenders. For it must be obvious to the meanest capacity that if such a soft metal as gold is enclosed in adamantine

easing the soft substance would soon get beaten and bruised by the mechanical friction it is made to undergo to such infinitesimal destruction that only chemical skill could again recover and consolidate. At the same time, it should be generally known that mercury alone will not attack or absorb the least fragment of gold unless it meets with it in a metallic state only, consequently thousands of pounds of auriferous elements may be enclosed in native matrices, and remain irreclaimable by mechanical skill if the proper chemical affinitive absorbers are not duly used to collect the invisible essentials to visible treasures. It is, therefore, not because any set of men should fail to produce golden eggs by the simple action of mercury, or by the free use of water and unfruitful paraphernalia, there may not be others who know how to apply their talents to fully complete what misdirected judgment has failed to perfect. I for one feel perfectly satisfied it is not from any fault in Nature's supply that so many Welsh gold companies have signally failed, but solely from the want of practical knowledge how to concentrate and solidify those manifold invisible auriferous ingredients and metalline specks so infinitesimally dispersed in certain areas; and unless all the golden constituents that are both chemically and mechanically associated within their respective matrices are reclaimed and substantially embodied, few gold mines will pay for working, as by merely extracting one moiety of the precious gifts from the womb of Nature, and leaving the other to irreclaimably pass by, is like operating on silver ore merely for the sake of the lead it might produce.

G. F. GOBLE.

Maentwrog, Oct. 9.

THE IGNEOUS THEORY—GRANITE ROCKS.

SIR.—In last week's Journal two correspondents give accounts of the Donegal granite. It is too frequently the case that in rebutting one theory we are apt to run into extremes in another. I see our crystalline theorists, if not reminded their ideas are old, and if they are not careful in stating what really are the facts, without building old theories on them, will at last only be following Prof. Sedgwick in turning up the stratification by "basalts," and then no doubt their crystals will "decompose," and their veins be turned into "intrusive rocks." But at present I beg leave to demur to that assertion. Veins are not intrusive rocks, but the matrices of minerals, found with the strata and crystals, have always a base, and the increase, comparatively speaking, is very trifling to

North Haaf Mine. Nor will his clumsy astre weigh as much as the small dust in a balance. But Capt. Francis has clearly corrected the Ordnance Map to suit his own purposes—to push the mine; and now, forsooth, when the veil is rent, he is angry,—personally offensive; and seeks to conceal the affair by some crude conceptions of what he imagines electricity did “hundreds of ages ago,” the account of which he has read in the rocks of the country somewhere near the Devil’s Bridge. Really, Sir, the famous author of “Ancient Geology,” &c., has wonderful faith in the credibility of your readers, but he should know that facts, and not dreams, are the stuff from which arguments are constructed. He has, however, contributed in no small degree to our scientific knowledge of the “lines of electricity,” through the Haaf Mine; and I can assure him the irreverent hand of your “technical” correspondent shall not touch the marvellous theory. Then, as to the contradictory statements of Capt. Francis, to which I gently allude, how are they explained? Not by arguments, not by facts, but by a laboured eulogy on Capt. Matthew Francis, pronounced by the distinguished author of “Ancient Geology” himself, who seizes the opportunity to ridicule the common scientific phraseology of educated men, and then with self-satisfaction he asks, “How about the strike of a piece of granite?” What has this to do with the palpable contradictions of Capt. Francis? It is totally beside the question in dispute, inasmuch as there are no granites or porphyries in the Cardiganshire mining district, and the “strike of a piece of granite” cannot, therefore, affect the strike of the sedimentary rocks in Cardiganshire. But, as I have not “avowed” myself, Mr. Warlington Smyth shall state the fact. Speaking of the mineral veins in Cardiganshire, he says, “They cannot be ascribed to the proximity of granites or porphyries, since this happens to be the only large portion of the shaly rocks of Wales in which not a vestige of any rock of igneous origin is met with.” (*Memoranda*, vol. II., page 656.)

A word more to express the obligation I feel to Capt. Francis for what he has written. He asks, “What is a horizontal section? I have (the continuo) heard of longitudinal, transverse, vertical, and oblique sections, but I know nothing of the horizontal section.” Well, Sir, I was not prepared for such an admission from a mining engineer, who boasts of his knowledge of the rocks in South Wales. But the best return I can make is to recommend him, by all means, to the Messrs. Stamford, of Charing Cross, who will be glad to supply him with the horizontal sections of the Geological Survey, from which

“we” I hope, soon learn that he cannot by the pretence of knowledge or by ignorant misrepresentation mislead an intelligent mining public.

Capt. Francis having thought fit, in his haste and vexation, to make the enquiry I put to him for the sake of truth a personal matter, I shall not enter further into controvert with him. I was anxious to promote a discussion for the purpose of eliciting truth, and of diffusing sound scientific knowledge through your columns; and it certainly does not matter who and what I am, so long as I deal with facts and admitted principles, and do not advance a single statement on my own authority; and until I do so I shall continue to describe myself, as hitherto—

C. T.
Carmarthen, Oct. 7.

THE GEOLOGICAL FORMATION OF THE EARTH—No. IV.

SIR.—In my last I stated that rocks are continually undergoing changes, the shells in them are more durable, and still remain as fossil shells, either in a state of decay, or, perhaps, nearly worn out; no shell is found in the new layers forming. Such beds are what the theoretical geologist terms stratification. I contend all rocks are more or less stratified, but the beds in siliceous rock are much thicker than in others, consequently they must be of more rapid growth. By rock growing I do not mean to impress on the public the idea that the earth is enlarging. Such cannot be; but for every new formation in nature there is a corresponding diminution of some other property or matter from other rocks, so as to maintain the equilibrium. Most practical men, whilst engaged in making excavations, have found cavities or open spaces between the beds, some so large that they could enter and walk about. These spaces are caused by the decomposition of one portion of the rock; it passing away in a gaseous or other state, and uniting with other portions of nature to form a new substance, whilst the remaining rock, from its quality, had not enlarged so rapidly as the decay had taken place. In nearly every bed these cavities present themselves, in which the practical man often finds beautifully formed cubes, some inches in dimensions, and not unfrequently in the same rock is to be found the impression or seat of others much larger in dimensions; of what composed there was not a vestige to be seen, with the exception of the quartz that formed the side walls. If we have such undeniable proof of one rock growing and another decaying, might we not be justified in asserting that every rock grows and decays?

The Geological Society of Penzance admit they have a portion of the elk’s horn that has become oxide of tin. They can likewise prove that crystals of tin have formed on leather, also on the side of a level, in less than a hundred years. I have myself seen hexagonal quartz $2\frac{1}{2}$ in. long that has grown in less than seven years. In this I can not be mistaken, as I drove the level in which it had grown after. Quartz is known to grow in Devon Consols Mine in six months. At Wivelscombe I could point out new red sandstones (apparently all washed sand, with beds of round pebbles in it). In this apparently washed sand there are regular, hard, and solid lodes of iron ore formed; and in the same sandstone is to be found similar cinder-like stones to those described by Mr. T. A. Barnes, of Whitby. And should he be disposed to visit the neighbourhood of Seend, he will find the iron ore there in flat beds, lying on blue clay, which again is overlaid with large oyster shells. This iron is not a volcanic production, it came up from the blue clay in gas, and crystallised there. I beg to tell him that such is the law of crystallisation with most rocks and stone, and that these beds of iron are now crystallising in form very similar to that of clover seed, to an extent of many miles over.

I will prolong my observations a little on rock formation, by supposing the lowest or primitive rock is granitic, or of any other siliceous kind, and that it was at one period under water. From this rock gases were produced, which ascending combined with the oxygen, water, and sediment, forming a new rock or rocks of itself, which when so formed would be of a different nature to that below. These new formations, undergoing their changes, and exhaling gases different to those below, would again combine to form another species of rock; and so a continuous circuit of layers of rock formation would be kept up, the one giving place to the other, until each in turn would be expended; hence so many changes in rocks. Notwithstanding the known law as to how many beds exist, from the supposed basis of granite up, these beds are found to be slightly different in their composition or proportion in different places; the colour, too, is not the same, still it is the same layer. Yet such slight differences often cause these rocks to be designated by a new name; instance the true quartz rock and the flints, how different in appearance, yet when analysed how trifling is the substance that caused the change. Again, the numerous rocks that are formed from silica, how many names they are known under? Lime is said to be found in 600 different forms. Iron is to be found in all rocks, and may be considered the cement of the earth. When undergoing the changes I have described, the attractive powers of the several classes are worthy of consideration, each settling down under its own law, even in the same stone. For instance, the granite, felspar, quartz, mica, iron, and spar all possess the property of keeping together under their respective heads; it is the same with every description of rock, so also have all rocks, metals, or minerals their several laws of crystallisation. Every new formation has its particular form of crystallisation, dependent on its composition; even with trees it is so, every species producing different leaves. Then, I say, it is folly for anyone to attempt proving these rocks to have been ever melted. Take, as an example, any rocks in the known world, and their different appearance can be proved to arise from their different composition only, and that their several component parts are to be found in the rock in which they are embedded, in the next locality, where the same layer of rock is apparently missing, or there in a different character. It will also be found that the surrounding rocks do not hold largely of the substances of which the missing rock should be composed,—i.e., the want of one single substance that aided the formation of the missing rock is sufficient to prevent its formation, notwithstanding the bulk of its component parts are there.—Oct. 8.

NICHOLAS ENNOR.

MY RECENT TOUR IN PORTUGAL.

SIR.—Having landed at Oporto on Sept. 7 last, I at once proceeded inland for the purpose of surveying mines reported to contain gold, tin, and antimony, which on inspection I found was the case. Gold mines I found had been worked extensively by the ancients, all the rubbish on the mines at present yielding gold. If my old friend, Mr. Evan Hopkins (with his voluminous writings on gold dressing, &c.), could only point out and warrant some cheap and expeditious process of extracting it, I have no doubt it would be found remunerative. I wish he would try his hand at it.

My next attempt was to get up the Douro, to examine the tin mines near Zamora, which are now being brought before the public. This I found impracticable, from the water in the river being so low; I, therefore, had to change my route overland for Tuy and Vigo, by diligence to Pontevedra, where I took horses and crossed the country to Caldelas. I there met a priest, the proprietor of one of the tin mines, who gave me a letter of introduction to a friend of his living near the mine, at whose house I was hospitably entertained. Long before I reached Tuy, which is situated about thirty miles from Vigo, I noticed the rock formations to be what is commonly called granite, but it contained no large crystals of felspar, and scarcely a trace of iron; in fact, I could not find a single stone of iron fit for the furnace in all these granite formations. I also found

“Suite extending from Vigo to Pontevedra, and again thirty miles south, with traces of iron, and mica, but nothing like a gossan met my view, forcibly reminding me of the Cornish motto—“That no productive mine existed two miles in granite,” and was convinced that tin could not be found there of any value, without a sudden change in the strata, otherwise the motto referred to would be upset. About a mile from the tin mines I observed a change in the appearance of the rock, which gradually became a kyllas, clay, slate, or grauwacke, all of the same origin. These layers of slate took about a north and south direction, dipping slightly against the granite. In this slate I found veins, composed of sandy quartz, felspar, and mica. Nine-tenths of these lodes are quartz, or rather it corresponds to the soft Cornish elvan—not granite, as reported. These elvan courses split up and diverge when they are not above a foot wide, and in many places scarcely divide the ground; when they come together again, like most other lodes, they make a much larger mass, at times from 20 to 30 feet wide. It is these extended masses that is found; that I tried to be very poor, yielding not above 6 or 7 lbs. to the ton. These courses have been mined on the hill side for seven miles in extent, but in no case that I could discover had the natives mined to a depth of 40 feet; they attempted adits, but I saw only one or two that intersected the lodes, and these are abandoned; in fact, the whole run is given up before it is sunk 40 feet deep, and in the majority of cases before sinking 20 feet, from which we may suppose the vein does not improve in depth. It has been represented by some part that water prevents them sinking; such is not the case, for I seldom found water in the pits, and nine-tenths, at least, are empty; and had water been an obstruction, the position is such that it could easily have been overcome by driving cheap adits. I further observed that where the courses are large only 3 or 4 ft. of the one side had been removed, from which it is evident the greater portion of the mass is poor, whilst water for washing is in every case very limited. To work these mines in depth would be expensive, as the quantity of lode sand required to be raised to pay expenses would in nearly every case involve the necessity of a steam winding-engine, or deep tunnel. Again, the courses dip with the rock, but quicker, consequently the hanging rock is continually running out to a wedge, and becomes unfooted, or without support, as the lode is worked away, therefore the cost in timber alone to keep the mine open would be enormous. I know of but one way by which it can be worked with any economy—that is, sink for a 20 ft. level and work up; follow up the working with stages, catching the lode sand and material as it is broken; and when this piece of lode is worked out, if found to pay, sink another 20 ft. level, and proceed as before. By this method a tunnel would be useless, as all the under portion would fall in and choke it up; in fact, it never could be kept open so as to work the mine and make it a paying one. I am doubtful if these mines could be worked by an English company at a profit, as they would require the best English miners to keep the ground open, and these men would not remain there except at extraordinary high pay. It is not the danger in working the mines alone that would prevent such men being procured, but the manners and customs of the inhabitants are so repulsive to civilised beings that no English people would remain there, they would be better circumstanced with the wild Indians of Central America. Mine host, for the honour of whose acquaintance I am indebted to the priest before referred to, is what may be styled a general merchant—sold a little of everything. That the accommodation with which he was provided has been surpassed, from veritable experience, I can but admit, as the

sleeping apartment to which I was introduced proved to be a corn chamber—no less, the doors being deprived of all means of protection to midnight incursion, and my companions more numerous than agreeable, my slumbers being frequently disturbed by the pertinacious obtrusiveness of the mosquito, in whose favour I resigned my apartment at the dawn of day. On getting down stairs I found little improvement, the fire being in the centre of a large room, without a chimney, and the inmates smoked as black as crows. From them I learned that the fire of heather was the remains of what had been their beds the preceding night, on which the men, boys, dogs, pigs, horses, and colts had slept indiscriminately, whilst on perches round the apartment had roosted the fowls, with which he appears to be abundantly supplied. The culinary department is no better arranged than that to which I have referred. In the morning they boil soup, which is eaten with bread made of Indian corn; but being a stranger myself, and entitled to better fare, I was provided with fried eggs, before cooking which it required my personal superintendence for a quarter of an hour in cleaning the pan. Water for the tea had to be boiled in the pot in which the soup had been made, and over which I had no control, but console myself with that or nothing. The wardrobe of the female fraternity appears to me easily provided, being a rag woud round them twice, forming a skirt (to which crinoline would be a decided improvement), whilst the body and shoulders are covered by a piece of coloured cloth extending to about the waist, underclothing, as worn by the sex in our country, to be seen in the daily avocations entertaining no particular sense of modesty, if I may be allowed to judge from those I saw eating out corn, who exposed themselves in a manner that would be considered quite inconsistent with propriety in a civilised country. Then, I say, what Cornishman would leave a comfortable home to go into a back settlement such as this, and to which an agent who could get any employment to go not for 10000, a year? In some parts of Spain a person might manage to get on, and in most of Portugal, but this place, above all others, I give up.

After surveying the before-mentioned mines, I started north-east for the Orense new road, with the intention of going to inspect the tin mines of the Zamora district, which are also before the public. But before expressing my views on the situation and prospects, I would refer to the consul and vice-consul at Vigo, who were both very kind in affording me information, together with a letter of introduction to an Englishman on my way. They also sent with me a person in their employ, to make every enquiry and procure information for my guidance. He took me to the house of a party connected with a tin mine at Beariz, said to be worked by an Englishman. This individual I believe to be a broker in London, whose establishment is situated somewhere about Pancras-lane. As he is carrying on the truck system, he happened at the time to be down at Vigo for stores. When we met, I naturally asked him my best route to the mines; and, instead of directing me, he replied that all the land was taken up, and that no Englishman was wanted there. I asked, “Was he a German?” No. I thought so, was my reply, as they are generally both civil and obliging. He then addressed himself a Scotchman; and, selfish or chivalrous-like, said they wanted no Englishman on their mines. I told him I never yet met one of his country who even knew tin when he saw it, or, what was more, where to go and look for it; and that I thought he was afraid to let an Englishman see what he was doing. We then parted. Afterwards, on my way through the district in which this mine is situated, I suddenly descended two sentinels or outposts stationed on elevated ground, who, on observing my approach, fell back in good order on the main body. Orders were instantly given, “Present arms! charge!” and before I knew where I was I was surrounded by the goody army of some twelve or fourteen individuals, armed with turnip-hoes, or, rather, to Cornishmen weapons more like the turf-mattock, as used on Farnborough Common. On my attempting to proceed I was seized, and the cry raised, “There shall come no Englishman here,” which was the first intimation I had that I was a trespasser on the mine of the Scotch broker. But it so happened that the highway led along the side of the works, where I had a full opportunity of witnessing what was doing. The best description I can convey of the broker’s body-guard will be by directing my readers to the frontispiece facing the title-page of “Robinson Crusoe,” but fearing some may not have it at command, and that they may have to visit this neighbourhood, it will be well that I should describe this adjunct to the Scotchman’s staff, for which they will be better prepared. The regimental dress of the broker’s troop consists of a head-dress and coat apparently in one piece, exposing only a very small portion of the visage, and extending about as low as the costume worn by the Highlanders, whilst the lower portion of the extremities are exposed in a corresponding manner. Whether they are a highland clan imported into the country, or genuine Spaniards, I cannot say; most likely the former, bearing out the old adage, “Go into what quarter of the globe you will, you are certain to be met by a Newcastle grindstone and Scotchmen.”

I can best convey to my readers the nature of this work by referring them to those I have already described; being worked about 30 ft. deep at the junction of several courses. They have not sufficient timber on the works to make a broomstick, neither have they a barrow or shovel. They dig all the stuff with the hoe, and wash it in a channel dug by the same or similar implement; and were the mineral gold, instead of what it is, with their present system of working it could not pay. They are above 1000 feet high on the hill, with very little water to wash with, and no one to manage or direct the works but a Scotchman, who is much more conversant with trucking.

If the clinching system to which I have referred prevailed with all classes, what would become of the Scotchmen that infest England, or even Cornwall, should “One and All” raise the cry, “We will have no Scotchmen here?” Why, the thousand and one that are there would have to recross the border, to which they have bid farewell, protesting they will always keep their backs on it.

On leaving this dreary region (which appeared the broker’s pride), I retraced my way to the Orense new road, and thence to Vigo, leaving the Zamora tin district for my next journey, which I hope to find more prolific in minerals and better conducted than the mines about Beariz.—Oct. 8.

NICHOLAS ENNOR.

P.S. It has just occurred to me that the Scotch tin astronomer is, I think, called Stran-

MINERS’ ASSOCIATION OF CORNWALL AND DEVON.

SIR.—I was pleased, upon reading the Supplement to last week’s Journal, to observe the remarks of Mr. C. Fox upon the progress of the pupils of the various Cornish Schools. I hope Mr. Fox will also insist upon the necessity of their obtaining a certain portion of their knowledge from actual practice, without which no prize should be awarded. Mr. Fox’s address was very good; but I yet hope to see him turning his back upon the Plutonic theory, as he would then be conforming more to the notions of the age we live in. With respect to the papers read, they were good, with but two exceptions. As to Capt. Charles Thomas’s, I agree with his views, but must complain of his noticing the remarks on lodes in reviews by theorists, many of whom would not know a lode were they to see one. Such notice is not worthy of Capt. Thomas or any other Practical who may follow so bad an example. The second paper is that of Capt. Tonkin, on Drawing from Mines. As I know him to be a practical and talented man, his paper took me by surprise, as he certainly appears to me to be waging a war against common sense—kibble drawing is only good to a certain extent.

Absence from England has prevented me from sending my letters so regularly as I wished; but as I have now returned, I shall go on with my remarks upon my foreign experience, as well as upon current matters.

N. ENNOR.

SLATE QUARRYING.

SIR.—Having had the best advantages to gain a thorough knowledge of slate quarries and quarrying, but having at present no connection, directly or indirectly, with any of them, further than taking a lively interest in their proper development; and having often observed the injury done to this country, and the disappointments and losses caused to capitalists through, sometimes, their own want of discretion in looking and enquiring properly where and when to speculate, but much oftener through the want of knowledge, skill, and economy on the part of those whom they appoint as managers; I prepared about four years ago, at the request of a gentleman interested in quarries, the enclosed letter for the *Mining Journal*, intending at the time to follow it up with remarks to where and how the best slate quarries can be found, and the mode of testing them with the least expense and delay. But the speculative spirit of the lode cooled down, and the letter was not sent. That spirit, however, is now reviving, indeed running high and wild; and should you think the enclosed might be of any service, either as caution or encouragement to honest capitalists who invest their money in slate quarrying, and thereby greatly improve the condition of this country, you will doubtless give it a space.

M. RICHARDS (Morgrygyn Machno).

RIGHT AND WRONG MANAGEMENT OF SLATE QUARRIES.

SIR.—As your Journal is professedly a “mining journal,” permit me, through its instructive and valuable columns, to invite the serious attention of the proprietors of slate quarries to the above important subject. It is a fact generally admitted that in order to carry out successfully any undertaking of magnitude, and to which any uncertainty belongs, there must be skill, perseverance, economy, and honesty observed in its entire management. Witness the frightful and most disastrous results that have very recently followed those banking, mining, railway, and commercial speculations in America, on the Continent, and in England, where due attention was not paid to the above simple elements in the management of them. The whole commercial and speculating world has been at a stand, and thousands have been utterly ruined by the panic; and, as far as investigations have been made, it is clearly proved that most of these monstrous and unprecedented failures have been caused by, or were the result of, wild, reckless, extravagant, unskillful, and often dishonest speculations. By your kind permission, I propose to prove that the same causes have too often led to the same ruinous results as regards slate quarrying operations in Ireland, Scotland, America, and even in Wales, the richest country in the world in slate mines.

In order to establish the above assertion, I need only show what is the result of the right and wrong management of slate quarries. This I will do by instancing a case well-known to many, and which came under my own observation. About four miles from the sea-port town of A—— is a farm called B——, the property of the late Mr. C——. Some fifteen years ago he was told by an old experienced quarryman that a vein of excellent slate was running through his land. Glad of this discovery, he determined at once to test it, and to turn it to some account. He went straightway to the manager of a neighbouring slate quarry, and asked the favour of having three or four of his workmen to go with him to try his vein of slate. The manager kindly consented, and said,

“You are welcome to have some of my men for a short time. I have some working at 2s., some at 3s., and some at 5s. a day. Which class will you have? I suppose the 2s. or 3s. men will answer your purpose now?” “No, Sir,” replied Mr. C——, “I always find it the best policy to do everything in the best way; and to do a thing in the best way one must employ the best and most experienced men. By your permission, I will take four of your 5s. a day men; for you may depend upon my word, if there be any profit to be had on 2s., there is more on 5s.” Thus ending the conversation, Mr. C—— left the manager with four of his best men, and at once set them to work his quarry. The vein, as anticipated, proved to be very good, and in the course of a few months the following advertisements appeared in the newspapers:

First Advertisement.

“Fifty workmen wanted immediately at D—— Slate Quarry,—namely, Twenty-first class quarrymen, ten experienced ‘bras holtwyrr,’ ten good ‘creigwyr,’ one skilful blacksmith, one good carpenter, and eight strong labourers.—N.B. None need apply unless he thoroughly understands his work.”

Second Advertisement.

“A manager wanted at D—— Slate Quarry. Liberal wages will be given to a man of real business habits, and who thoroughly understands quarrying in all its branches. None need apply for the appointment unless he be a brought-up quarryman, capable of instructing the men in every branch of quarrying. Applicants must attend at the quarry by two o’clock on the 18th inst.”

In the course of a fortnight the number of workmen advertised for were had, and set to work; and five gentlemen waited upon Mr. C. at the time fixed upon, as applicants for the appointment of manager.—Mr. L., of Liverpool, watchmaker; Mr. J., of London, shoemaker; Mr. J. of Dublin, engineer; Mr. T., of Cornwall, miner; Mr. H., of Carmarthen, slate quarry agent. Every one of these gentlemen produced first-class testimonials of character and competency. But Mr. C. knowing it to be rather an easy thing for any one, competent or not, to get testimonials, in order to be himself a judge and witness of their ability and fitness to manage a slate quarry, took them all to a shed close by, where two quarrymen were busily engaged in splitting and dressing slates. Addressing Mr. L., Mr. C. said, “Sir, please to sit down there (pointing to a small stool, on which one of the quarrymen sat splitting), and let me and these two quarrymen see you splitting and dressing that stone there.” Mr. L., in confusion, replied, “I beg your pardon, Sir, I do not quite understand this curious splitting and dressing work, as I was not brought up in a quarry, but I have often seen a good many slaves brought to Liverpool yonder, and I feel certain, if you appoint me your manager, I would work the quarry to the best advantage, and to your entire satisfaction. Please to read again my testimonials, which are from respectable gentlemen known to you, and you will find, Sir, that you cannot get a more qualified person to manage your quarry.” Mr. C. rather warmly replied, “Yes, Sir, I find your testimonials hold you out as a first-rate man, which only shows what little weight a bare testimonial ought to get with us when selecting a man to

newspapers, periodicals, and magazines; there will also be lectures given, and a lending library will be established, as well as evening classes for various branches of instruction. During the winter months concerts will be given, and every effort will be made to afford other mental and social instruction.

Meetings of Mining Companies.

REDMOOR MINING COMPANY.

A general meeting of shareholders was held at the company's offices, George-yard, Lombard-street, on Tuesday.—Mr. J. HUTTON in the chair.

Mr. J. WATSON (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. The accounts, made up to the end of Aug., showed—

Balance last audit	£ 249 11 7
Calls received	248 0 1
Tin ore sold	1070 19 10
Arsenical soot	57 6 8 = £1725 18 2
April mine cost	£ 229 8 7
May ditto	217 0 3
June ditto	205 8 10
July ditto	204 7 11
August ditto	188 9 4
Merchants' bills	458 5 11
Royalty	49 15 6
Discount	1 7 6 = 1552 0 10
Leaving credit balance	£178 17 4

The balance of liabilities over assets was 1721. 15s. 9d.

The report of the agent was read, as follows:—
Oct. 5.—Since my last meeting report we have driven the 40 west, on Johnson's lode, 8 fms. 10 in.; throughout this driving we have broken some good saving work; the lode in the present end is about 18 in. wide, carrying good stones of tin; this end is now further west than the perpendicular of the first (Pomery's) cross-course, as seen in the back of the 70, and within 9 fms. of the second (Pomery's) cross-course should its pre-underline continue, 1½ ft. It is a mere repetition to say we expect to find something good around these cross-courses at the 40. The 70 west has been driven 6 fms.; the lode is about 2½ feet wide, containing a quantity of blende, mixed with wolfram, spar, and munde, a very kindly lode, worth about 87 per fm. The 80 west has been driven 5 fms. 5 ft. 1 in.; the lode is about 18 in. wide, worth about 97 per fathom. We have about 6 fms. more to reach Pomery's cross-course, then we shall run through the 70, and open some good tribute ground. We have eighteen men on the ground, at an average tribute of 11s. in 17. We have about 3 tons of tin on the floors, 40 tons of arsenical soot, and about 40 tons of munde and coppery ore.—T. TAYLOR.

The CHAIRMAN having moved the adoption of the report and accounts, congratulated the shareholders upon the prospects which the property presented, and from the tenor of the agent's report he thought they had reason to hope that at the next quarterly meeting the mine would be in a much better position than at the present moment. By the accounts just submitted it would be seen that during the past five months there had been sold upwards of 15 tons of tin, in addition to which there were still 3 tons upon the floors, and a quantity of arsenical soot. It would also be seen that at the last meeting there was an adverse balance of 2427l., whereas at the present meeting the debit balance was only 1721. Had the tin been sold, the greater proportion of the cost of producing which had been paid, instead of there now appearing an adverse balance of 1721, there would have been a balance on the credit side of the account of 1551.

The SECRETARY said that in all probability they would meet with some very good ore ground about the cross-courses in the 40 west. They had a large quantity of excellent quality ore ground, which could be worked away at a low tribute, and a very slight increase in their returns would soon show a good balance in favour of the mine.

The report and accounts having been unanimously adopted, a call of 6d. per share was made.—A vote of thanks to the Chairman terminated the proceedings.

TAMAR SILVER-LEAD MINING COMPANY.

The annual ordinary meeting of shareholders was held at the company's offices, Adam-street, on Monday.—Mr. DUNSDORF (managing director) in the chair.

The notice convening the meeting having been read, a statement of accounts was submitted, from which the following is condensed:—

Balance last audit	£ 3,098 11 1
Sales of ore	10,037 7 0 = £13,135 18 1
Mine cost, Sept., 1860, to Aug., 1861	£10,609 9 7
Interest and discount	64 11 4
Dividend paid, December, 1860	1,200 0 0 = 11,874 0 11
Leaving credit balance	£1,261 17 2

Mr. WOLVERSTAN (the manager) read the report, as follows:—

Oct. 5.—Since the last general meeting the engine-shaft has been sunk 2 fms. 3 ft. 6 in., and it is now 4 fms. 1 ft. under the 237 fm. level; the ground is favourable for progress. The 237 fm. level south has been driven 31 fms. 1 ft. 6 in.; the ore ground passed through in the 226 fm. level having dipped south faster than anticipated, this end (the 237) has not yet reached it; for the last 5 fms. the lode has produced good stones of ore; in the end it is 3 ft. wide, yielding saving work, and as it is very similar in character to what it was in the 226 previous to meeting with the ore ground, an important improvement is anticipated immediately. There is one stop working in the back of this level, which at present produces 5 cwt.s. of lead ore per fm., but will shortly become more productive, a new lode in Treloar's winze for 6 fms. deep yielded full 10 cwt.s. of lead ore per fm. The 226 fm. level south has been driven 37 fms.; the lode for 21 fms. of this driving was poor, since it has produced on an average from 5 cwt.s. to 6 cwt.s. of lead per fathom; in the end it is 18 in. wide, and will yield 6 cwt.s. of lead per fathom; the lode has not proved so productive as we were led to hope from its fine appearance when driving through it in the 215 fm. level. Treloar's winze has been sunk from the 236 to the 237, and laid open profitable ground, in addition to securing good ventilation for this part of the mine. The stopes in the back of this level produced on an average 12 cwt.s. of lead per fm. (four in number). The 215 fm. level has been driven 56 fms. 1 ft., the lode has produced on an average throughout this driving 13 cwt.s. of lead per fm.; in the end it is very much improved, the lode being now 2½ ft. wide, and worth 20 cwt.s. of lead per fm.—a fine strong lode. The stopes in the back of this level produce on an average 12 cwt.s. of lead per fm. (four in number). The 205 fm. level has been driven 28 fms. 4 ft. 6 in., and being poor is suspended. There are two stopes working in this level, each of which produces 5 cwt.s. of lead per fm. The ore ground in the back of this level is nearly exhausted. The pumps have all been cleared from the 95 upwards, and the pitwork and machinery throughout the mine is in excellent condition. In consequence of the shoot of ore gone down in the bottom of the 226 dipping south much faster than we had reason to expect, we have not reached it in the 237 so soon as we anticipated. This, together with the falling off of the productiveness of the lode in the back of the 226, has caused the diminution in the returns, but the recent improvements in the ends we hope will continue, and enable us to again bring up the sampling to the previous usual quantity.—J. WOLVERSTAN, T. FOOT.

The CHAIRMAN, in moving the adoption of the report and accounts, said he would trespass upon the time of the meeting while he drew attention to the circumstances which had rendered the financial position of their company in a less flourishing condition than at the last annual meeting. In the first place, the mine itself had been poorer. That, he need not say, was a circumstance over which they had no control; but the result had been that during the 12 months they had sold only nine parcels of ore, as against thirteen the previous year, when large dividends were declared. In all mines, and more particularly in silver-lead mines, they were liable to a variable quality of ore ground; and, therefore, if during the past year their levels had not turned out ore ground of so rich a quality as during the previous year, it was a matter which no skill nor foreknowledge could have anticipated or averted. Another circumstance which had militated against their profits was the great fall in the price of metal. He found, upon taking an average of the sales of the previous year, and comparing them with those of the past year, that there had been a difference of exactly 34. per ton, with the exception of the first sale, on Nov. 10, 1860, which, as represented in the accounts just submitted, realised 247. per ton. There was nothing like such a corresponding difference in the produce, the difference being simply in the price of pig-lead. By a reference to the respective produce, which he held in his hand, he found they were remarkably alike—indeed, an average of 10s. per ton would far exceed any variation which had taken place throughout the year.

Mr. WOLVERSTAN said that whenever the lode became more solid it yielded more silver. The CHAIRMAN said the facts to which he had alluded, added to the large amount of costly work which had been performed, explained the cause of the financial affairs of the company not being in such a favourable position as at the last meeting. As regards the future prospects, he would just draw the attention of shareholders to the plan lying upon the table, from which it would be seen that they were now in a much better position than for some time past, for they had now three levels in course of driving, and the shaft had been sunk some distance towards the depth necessary for the commencement of the fourth, which must be regarded as a very encouraging fact, the more especially as two years since they had but one level, from which the whole of their returns were obtained.

Mr. WOLVERSTAN, in answer to questions, replied that he did not anticipate the least difficulty as to the water, at that depth (245 fms.) in most mines there was a certain difficulty, but he believed that would be anticipated in the usual way, and that they would be able to proceed with the development of the mine without let or hindrance.

The CHAIRMAN said they had reason to believe that the best ore ground in the mine was yet to be developed. The end in the 226 fm. level was producing 21 cwt.s. of ore per fm., and in the 215 they had a fine run of ore ground; and as regarded the expense of developing the mine, he believed he could safely say there was not a mine of such a depth in the two counties that was worked at so cheap a rate. Having stated that he regarded the prospects which the mine presented as anything but of a discouraging character, he concluded by moving the adoption of the report and accounts.

Mr. BIRDSEY seconded the proposition.

Mr. SEWARD enquired if the reserves were about the same as at the last meeting?—Mr. WOLVERSTAN replied that the reserves were not quite so much as they had been, but their prospects were far better than those of the last year—they had more ground really opened than before. In the 205 the ore ground was nearer to the shaft, and in the 215 it was nearer still. In the 215 there was a long range of ore ground, all solid, with no poor ground in it.

Mr. BIRDSEY was decidedly of opinion that although their financial position was not quite so good, yet that the mine itself was in a very much better position than was the case when they last met.

Mr. GREGORY enquired at what rate they were sinking the shaft?—Mr. WOLVERSTAN replied at about 2 fms. per month. He did not think they could calculate upon more than that; it was true the ground was easy, but when they had but one shaft there were certain hindrances which prevented them calculating upon more than 2 fms. per month.

The CHAIRMAN said that as 3 fms. per month was the average sinking of Cornwall, if they could succeed in sinking 2 fms. per month with all their difficulties, they had every reason to be satisfied with the progress made.

Mr. WOLVERSTAN, in answer to a question, replied that before the next meeting the 250 fm. level would be reached, and probably partly developed.

The CHAIRMAN, in answer to a question, stated that the average price the ore realised during the past year was 19. 0s. 6d., whereas the average price realised the preceding year was about 22. During the preceding year they paid four dividends. He personally, both as a director and a shareholder, somewhat doubted the policy of having divided so closely, for he would rather have preferred that, instead of paying four dividends in one year, they should have paid six in two years. But in a mine like Tamar it was somewhat difficult to foresee which was the best course to adopt. For instance, they were in that rich branch of ore for five or six consecutive months, during the whole of which period the end was reported from week to week to be worth 2 tons per fm.: it continued to yield 60 tons every four weeks as regularly as possible, the result of which was that

they had thirteen sales against twelve months' costs. Now, it was altogether impossible for anyone to have foretold whether such steadily maintained returns would continue, or whether they would increase or diminish. It would be seen, then, that it was a difficult problem to solve, whether under such circumstances it were better to divide the balance, which was quite equal to the declaration of a dividend, or whether the amount should be carried over, to enable the board to equate the declaration of dividends. If the lode should again become as valuable, which was more than probable, for now their monthly cost seldom exceeded 800/-, but they could not speak with any degree of certainty whether the lode would be found as rich in the level being driven as it had proved to be in the level above. There had been of late a great deal of discussion, which opened so broad a question, one knew hardly which view to take—whether a mine should be worked in such a manner as to keep a quantity of ore in what was called reserve, and thereby maintain for the property a somewhat steadier commercial value, or whether the ore should be taken away as fast as practicable, provided, of course, it were taken away with the utmost possible economy. That was a question upon which, at the present time, mining authorities were divided. But as far as regarded Tamar they had no option, because they had but one shaft. He felt it to be his duty to make these remarks, because, although he wished it to be distinctly understood that he made no prophecy, yet he believed they had good reason to expect that Tamar would soon again produce 60 tons per month, when the question would again arise—Shall we divide our profits as we get them, or shall we reserve them? He at all times declined guaranteeing anything in mining, but he most certainly was unaware of any circumstance calculated to anything approaching discouragement. As regarded the cost of the past year, it would be seen that the lode had continued to decline.

Mr. WOLVERSTAN did not see anything that was likely to increase their present cost. Mr. CONDY enquired, at the depth of 237 fms., what quantity of lead per fm. would pay for extraction?—Mr. WOLVERSTAN replied that 5 cwt.s. per fathom would pay.

Mr. SEWARD enquired if any provision had been made for the miners to descend and ascend?—Mr. WOLVERSTAN replied that the best means practicable had been arranged.

The report and accounts were then unanimously received and adopted, when votes of thanks were accorded to the Chairman, directors, and manager, and respectively acknowledged, when the proceedings terminated.

VALE OF TOWY MINING COMPANY.

An ordinary general meeting of proprietors was held at the company's offices, Crown-court, Threadneedle-street, yesterday.—Mr. J. HARRIS in the chair.

Mr. T. FIELD (the secretary) having read the notice convening the meeting, submitted a statement of accounts for three months, which showed a credit balance of 95l. 10s. 8d.

The SECRETARY stated that a request having been made by the shareholders at the last general meeting to have a full and minute inspection of their property, Messrs. Phillips and Darlington were engaged, and in concluding an elaborate and very encouraging report, state that after pursuing their investigations in every available direction, and collecting all the data at command, they arrive at the following general conclusions:—

1. That no radical improvement is to be effected either in the system of working, or in the various auxiliary appliances, although the latter are in one or two cases susceptible of advantageous modification, but it would only be judicious to carry out these in the event of the mine becoming permanently profitable.—2. That the character of the developed portion of the lode is such as to render it desirable that the tribute system should be introduced wherever practicable.—3. That it would be injudicious to reduce the present amount of tutwork, since it is absolutely requisite to throw open additional portions of the lode as rapidly as possible.—4. That the following work should be vigorously carried out:—The engine-shaft pushed to a 120 fm. level, and on attaining this depth, galleries driven both north and south. Continue to advance the 100 both north and south, particularly in the former direction, in order to examine the ground between this and the 80 fm. level. Continue the drivage of the 90 south. Continue the drivage of the new adit, since a discovery at this point might of itself alter the position of the undertaking. Although this undertaking has been in existence for a period of 12 years, and the profit made, together with the present value of the machinery and materials *in situ*, will perhaps scarcely amount to the capital expended, nevertheless we are of opinion that this mine is worthy of further exploration in depth, and that if necessary the additional expenses should be met by a call on the shareholders. Had the recent change in the lode afforded galena instead of blende ore, the mine at the present time would have been largely profitable; and we add further, that in some of the most productive mines of the kingdom blende has been found at a considerable depth, and beneath it large and continuous deposits of lead ore have been met with, and we, therefore, further recommend that the engine-shaft be sunk at least another 20 fms.

The report of Capts. Waters and Harvey stated that they had 27 pitches, worked by 56 men, at tributes varying from 60s. to 140s. per ton of lead ore. There is a considerable extent of unworked ground standing south of the engine-shaft, but the principal deposits have been taken away, so that their returns in this ground are likely to fall short during the next quarter. All their engines and pitwork are in first-rate working order. Since the last meeting 113 fms. 3 ft. 9 in. of ground has been removed. They have 152 persons employed, exclusive of carriers of coal, ore, wood, &c.

The CHAIRMAN, on behalf of the committee, having handed in a considerable number of proxies, moved the adoption of the report and accounts.

Mr. HOPGOOD said that the shareholders who had intrusted him with their proxies had so acted believing that he would use them for the promotion of the best interest of the company. But he was free to admit that, although he had been determined to, if possible, carry his point, as soon as he had perused the able report of Messrs. Phillips and Darlington, he felt that he was deprived of his weapons, and that it would be a breach of faith to use his proxies in any hostile manner. All he could say was that the report of Messrs. Phillips and Darlington reflected the greatest credit upon them, for it was one of the most lucid and comprehensive reports he had ever read. It was not his wish to act in the face of truth, and when that report stated Capt. Waters had worked the mine in a most miner-like manner, he felt it would be an insult to the meeting, and at the same time opposing the wishes of those parties who had entrusted him with their proxies, if he continued to press the question.

Mr. DUNSDORF thought it must have struck the minds of those who had read the two reports that they concurred in every important point, upon which any scientific men might differ.

The CHAIRMAN said the next question was the appointment of a committee.

Mr. HOPGOOD said that, in order that no personal feeling might exist, he would propose that the present committee be re-elected, which, being seconded, was put and carried.

Capt. WATERS, in answer to a question, stated that their prospects in depth were of the most unfavorable character. Every man, who had seen the lode at the bottom was of opinion that they were approaching a much richer mass of lead than they had ever had before, and in that opinion he fully concurred. The mine was now getting down to the metaliferous bands of the district.

A vote of thanks to the Chairman terminated the proceedings.

DEVON UNION MINING COMPANY.

An ordinary general meeting of shareholders was held at the company's offices, Winchester-street, yesterday.—Mr. W. DOUGLAS in the chair.

Mr. W. S. TROTTER (the secretary) read the advertisement convening the meeting, and submitted a statement of accounts made up to June 30, 1861, which showed a credit balance of 436l. 1s. 4d.

The report of the directors was read, as follows:—

Oct. 11.—Your directors have great pleasure in reporting that since the last general meeting a steady progress has been made in the development of this undertaking. The former adventurers in this mine had discovered such branches of copper ore in the upper level as to lead to a strong mining conviction that, at a greater depth its veins would be found very profitable in copper ore, and the object of the present company was to make this deep trial, and the directors have now to report that since the last general meeting, and in accordance with their recommendation, progress has been made in the working necessary for attaining this end. The sinking of the principal shaft has been continued to a depth of 40 fathoms, and levels commenced on the vein at this depth to attain a good saving work, and is yielding occasional stones of rich copper ore; but although this is a very promising symptom, our agents do not consider the depth yet attained as sufficient to anticipate copper ore in much paying quantities. It will, therefore, become necessary to continue the sinking of the main shaft, and to do this Quick's shaft must also be deepened in order to assist in the proper drainage. Additional machinery has

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worth from $4\frac{1}{2}$ to 5 tons of ore per fathom; the stopes in the sole of this level turns out 4 tons of ore per fathom, where the lode is regular and strong. The two stopes north of the rise yield on an average $3\frac{1}{2}$ tons of ore per fathom; the lode in this part still carries large portions of quartz in its composition. A section of the workings on this lode was recently forwarded with the copper vessel, which will enable you to see more clearly the different points of operation. The dressing of the old stocks is now pretty well completed; we are now engaged thoroughly clearing out the mine, and other necessary jobs, before the winter sets in. At the small concerns there is no alteration to note since our last, where our proceedings have latterly been rather irregular, owing to the tributaries being so much employed at other work; we have, however, a plenty of hands now, a number having been sent us from the smelting-works in the last week, and although it is too late to commence much surface work, you may rely on their being applied to the best advantage.—CHARLES TRELEASE.

FORTUNA.—Sept. 28: **Canada Incosa**—West of Taylor's Engine-shaft: The lode in the 7th level, west of Gomez' winze, is large, spattered with lead, and promising improvement. The 6th level, west of O'Shea's shaft, is worth $4\frac{1}{2}$ tons per fm. The lode is 3 ft. wide, 1 ft. of which is very rich, and the rest leady throughout. The 4th level, west of Rendorn's winze, is worth 2 tons per fm.; this hole is very compact, and of a promising appearance. The lode in the 3d level, east of Judd's shaft, continues small and poor.—East of Taylor's Engine-shaft: The lode in the 4th level, east of Lownde's shaft, is disarranged. The same level, west of ditto, is worth $1\frac{1}{2}$ ton per fm.; the lode is chiefly composed of calcareous spar and lead ore. The 3d level, east of Carro's shaft, is worth 2 tons per fm.; the lode is looking very kindly indeed. There is no improvement to notice in the 2d level, east of Bartolomeo's winze. Suez's winze is worth 2 tons per fm., and the lode very strong and regular.—Los Salidos Mine: The 5th level, east of Antonio's winze, is worth 2 tons per fm.; the lode is still very large. The ground in the 5th level, west of Fernandez' winze, is hard for driving. The 4th level, west of Salvador's winze, is worth 1 ton per fm. The 4th level, east of Calogian's shaft, is worth $\frac{3}{4}$ ton per fm. The 3d level, east of Munio's winze, is worth $1\frac{1}{2}$ ton per fm.; the lode is looking very kindly, and opening good tribute ground. The 3d level, west of Baena Amigas' shaft, is worth 2 tons per fm. The lode in the 2d level, east of San Miguel's shaft, is divided into small branches. The branches in the 1st level, east of San Miguel's shaft, continues small. The 4th level, east and west of San Pablo's shaft, is worth $\frac{3}{4}$ ton per fm.; the lode is small, and the ground hard for driving.—Shafts and Winzes: Morris's engine-shaft is worth $1\frac{1}{2}$ ton per fm. The ground in San Gabriel's shaft is hard for sinking. Olalina's winze is worth 2 tons per fm.; this winze is going down in a splendid lode, and, considering that it is on the west side, near the elvan course, and in advance of the 5th level, which we are driving straight towards it, we attach great importance to it.

LINARES.—Sept. 28: West of Engine-shaft—South Lode: The lode in the 95 is worth $1\frac{1}{2}$ ton per fm. The branches in the 85, west of Seville winze, are still very small. The lode in the 61, east of Warne's engine-shaft, is small and unproductive. The 61, west of Warne's engine-shaft, is worth $1\frac{1}{2}$ ton per fm.—lode large, open, and of a very promising appearance. The 51, west of Toberne's shaft, is worth $\frac{1}{2}$ ton per fm.—lode small at present. The 41, west of Crosby's shaft, is worth 1 ton per fm.—lode looking very kindly indeed, and letting out a good quantity of water.—East of Engine-shaft: The 95, east of engine-shaft, is worth $1\frac{1}{2}$ ton per fm.—lode large, chiefly composed of carbonate of lime and lead ore. The 55, east of Ramiro's winze, is worth $\frac{1}{2}$ ton per fm. There is a good lode in the winze in advance of this end, sinking below the 75. The 75, east of Taylor's cross-cut, is worth $\frac{3}{4}$ ton per fm. There is a good lode in the bottom of this end, and we expect it will shortly improve.—North Lode: The 75, east of Ordonez' winze, is worth $1\frac{1}{2}$ ton per fm. The lode in this end has improved since our last, and is again looking very kindly. The 61, east of Damaso's winze, is worth 1 ton per fm. The lodes fluctuated considerably of late; it is again improving.—Shafts and Winzes: The English sumpmen are cutting ground for the larger pitwork in the engine-shaft. San Francisco shaft is worth 1 ton per fm.; the lode is large and spotted throughout with lead. San Eduardo winze is worth $1\frac{1}{2}$ ton per fm.—lode large, and spotted throughout with lead. San Luisa winze is worth $2\frac{1}{2}$ tons per fm.; this winze is going down in a splendid lode, and, considering that it is on the west side, near the elvan course, and in advance of the 5th level, which we are driving straight towards it, we attach great importance to it.

BORRASOLLE.—Wm. Dixon, Oct. 10: The workings on Sims' stage, where we are cross-cutting to intersect the waddy vein (cut at Gill's stage above), is progressing favourably. Also the driving on Gill's stage, from which we have obtained 14 pounds of black lead of first quality since my last report of Sept. 26, with what we have obtained makes 55 pounds of first quality this month: the appearance of this working is the same as last report.

BOSCUNDLE.—H. Vivian, Oct. 7: Since my report of Aug. 10 we have driven the 14 fm. level 10 fms. west of Morcon's shaft in killas, and have now commenced cutting the lode in the side of the level; it is 4 ft. wide, worth 77 per fm.; having communicated this level to the adit by a winze, we have plenty of air, and are now extending west with all speed, and hope in about three months to come under a shot of tin which we had at the adit level for about 25 fathoms in length. We have extended the adit 10 fms. further west, 5 fms. of which were driven in the lode, and 5 fms. in the killas; the lode is 7 ft. wide, and unproductive; we have now cut into the lode in the end, and have found good stones of tin; we are stripping the killas and capsels from off the lode, preparatory to cutting it out. We hope to commence in the lode in a few days. We have two stopes working in back of this level.—In No. 1 the lode is 9 ft. wide, worth 107 per fm.; in No. 2, lode 6 ft. wide, worth 107 per fm. Our prospects are cheering.

BRONFLOYD.—J. Lester, Oct. 9: There is no alteration in the No. 1 lode in the 18 west of cross-cut, since last report. We have got in the air-pipes in the 17, and began again to sink the winze. There is no alteration in the character of the lode. The lode in the rise above the 17 is worth from 10 to 12 cwt. of lead ore per fm. The south lode, west of Thompson's cross-cut is looking a little better for lead ore than when last reported. We are getting on well with the driving of Barton's cross-cut towards the south lode.

BRONHAULOG.—E. Edwards, Oct. 8: In the middle level the No. 3 stope is about 18 fm. level 10 fms. west of Morcon's shaft in killas, and have now commenced cutting the lode in the side of the level; it is 4 ft. wide, worth 77 per fm.; having communicated this level to the adit by a winze, we have plenty of air, and are now extending west with all speed, and hope in about three months to come under a shot of tin which we had at the adit level for about 25 fathoms in length. We have extended the adit 10 fms. further west, 5 fms. of which were driven in the lode, and 5 fms. in the killas; the lode is 7 ft. wide, and unproductive; we have now cut into the lode in the end, and have found good stones of tin; we are stripping the killas and capsels from off the lode, preparatory to cutting it out. We hope to commence in the lode in a few days. We have two stopes working in back of this level.—In No. 1 the lode is 9 ft. wide, worth 107 per fm.; in No. 2, lode 6 ft. wide, worth 107 per fm. Our prospects are cheering.

CROOKHAVEN.—H. Thomas, A. C. Langton, Oct. 7: On Saturday last we let the following bargains by public competition:—To sink on south lode, under the 40, with six men; the ore part to be saved clean, for which the men are to be paid 5s. per ton; stent 3 fathoms, taken at 31. 10s. per fm., and is set at 31. per fm. The lode in this winze is large and regular, carrying a well-defined wall, with a leader of ore stuff about 9 in. wide, with every indication of a further improvement. The other part of the lode is thinly mixed with yellow ore; this lode is greatly improved in character and appearance, and we hope next week to advise you of having good saving work from this bargain. Set the western trial shaft to sink with three miners and three labourers, stent to the 20 fathom level; take at 51. per fm. The we follow up efficiently, with promise of good results, and I am making arrangements as fast as possible to get all these points into action. Now is our time while we can satisfactorily command the drainage.

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CROOKHAVEN.—H. Thomas, A. C. Langton, Oct. 7: On Saturday last we let the following bargains by public competition:—To sink on south lode

82 per fm. The 90 rise is worth 300 per fm. In the 68 winze the lode is promising for the production of tin.—Street and Bragg's: In the 47 east the lode is very small at present, but we expect to find it again shortly, as it was subject to these variations in the level above. The 40 east is worth 82 per fm.

PENDEEN CONSOLS.—Wm. Eddy, J. Warren, Oct. 5: We have not taken down the lode in the several ends throughout the mine since last reported, consequently we have no change to notice.

PROVIDENCE.—W. Hollow, Oct. 8: Higgs's Shaft: No. 3 carbona is worth 201 per fathom. No. 4 carbona is worth 207 per fathom. The stops in bottom of the 75 are worth 142 per fm.—New South Lode: In the 65 east the lode is improved; it is now worth 301 per fm. No. 1 stop in the bottom is worth 907 per fm. No. 2 stop in the bottom is worth 901 per fm. No. 3 stop in the bottom is worth 205 per fm. In the 75 east the lode is 1 ft. wide, with stones of tin. There is no change in any other part of the mine to notice.

PWLL ROMAN.—M. Francis, Sept. 25: I have this day examined this mine, and I am glad to inform you that the lode contains a great deal of rich copper ore, of a very high price when compared with the generality of Cornish mines. My experience of copper mining is very extensive, and I have worked veins that under my management have given as much as 12,000/- profit per month. One of the winzes sunk under the adit in your mine, 25 fms. east of the engine-shaft, on the north part of the lode, yielded as much as 100/- worth of ore for 6 fms. of sinking, which is a very profitable yield of metal. And no lead has yet been driven under this very valuable ore ground to render it profitable or marketable, by means of drainage and ventilation. I should suppose, from the nature of the lode in the 20 or bottom level, that there must be great quantities of ore standing on the north side, which would not be observable to a person unacquainted with practical mining: in fact, I am certain that this is the case, and that there must be a very rich deposit between the ore on the north side of the present driving in the 20 and the winze with the rich ore before alluded to. I consider the whole of the veins of Cardiganshire is generally followed by good formations of lead ore below, and they generally indicate the presence of each other with great certainty and regularity. Were I a holder in this mine, I should look with great confidence to its soon being brought into a very productive state. I am very sorry I cannot compliment the management upon the miner-like condition of the works. The adit is flooded with water, which ought to be clear. The woodwork of the winze is in a dangerous condition. The 10 fm. level was so full of rubbish and water that I could not examine the lode in it, and the bottom level was crammed with debris. I consider that these circumstances are so indicative of defective management, that I should despair of ever making a mine profitable where they occur. I should advise that the mine be kept clear of stuff, which would render it more cleanly and healthy for the workmen; and that the copper ground shown in the upper sections of the mine should be ventilated and drained as soon as possible, when your mine, I think, will turn out a very profitable concern.

ROSEWALL HILL AND RANSOM UNITED.—E. Thomas, Oct. 8: The lode in the Ransom engine-shaft, sinking below the 110, is disordered by the influence of the cross-course, worth 67 per fm.

The lode in the end driving west of the cross-course, in this level, is 3 ft. wide, and worth about 401 per fm. The lode in the winze sinking below this level is worth 257 per fm. The lode in the end, east of shaft, is disordered, at present worth 47 per fm. The lode in the 100 east is much the same as for some time past. In the 80 and east no lode has been taken down since last reported on; the stops in the back of this level are worth from 91 to 101 per fm. The stops in bottom of the 70, east of the Ransom shaft, are worth 124 per fm. The stops in bottom of the 60, east of the shaft, are worth on an average from 121 to 141 per fm.

ROSEWARNE CONSOLS.—J. Berriman, Oct. 8: In the 20, on the caunter, the lode is 1 ft. wide, unproductive. In the 40, west of engine-shaft, there is no change to notice.

In the 40, east of engine-shaft, the lode is 1 ft. wide; this lode is looking well, having greatly improved, but we cannot tell its value; the men are driving by the side of the lode, but we shall take it down on Friday next. We hope to get our flat-rods to work next Saturday. No change to notice in any other part of the mine.

ROSEWARNE UNITED.—E. Cartwheel, Oct. 10: In the 90, west of footway-shaft, the lode is 2 ft. wide, producing a little ore. In the 90, east of Jenning's shaft, the lode is 2 ft. wide, yielding good stones of ore. In the 80, east of Jenning's shaft, the lode is 3 feet wide, yielding good stones of copper ore, with a more promising appearance than for some time. In the 74, at Richard's we have cut the lode; it is about 1½ ft. wide, impregnated with ore throughout. In the 58, west of Richard's shaft, the lode is 2½ feet wide, producing ½ ton of copper ore per fm.; from the appearance a further improvement may be expected. In the 46, east of Lane's shaft, the lode is 2½ ft. wide, producing stones of copper ore. In the 34, east of Wellington's shaft, the lode is 5 feet wide, opening tribute ground. Our tribute pitches still continue to yield about the average quantity of ore.

SORTBRIDGE CONSOLS.—J. Richards, Oct. 9: Hitchins's Engine-shaft: In the 62 west the drivage is still being continued in search of the lode, to the west of the cross-course.

In the 50, west of Crew's cross-cut, on the south part of the main lode, the lode is 15 inches wide, containing mudi, mandic, peach, capel, and a small proportion of copper ore, and is assuming a more promising appearance.

In Mayne's stope, in back of the 50, on the south part of the main lode, the lode is worth ½ ton of ore per fm. The 40, east of Head's rise, is home to about the eastern boundary, and the lode proved up to this point a good course of ore, worth 307 per fm. Gilbert's rise, in back of the 40, east of Head's rise, is being put up upon the lode; where last taken down the lode is a good course of ore, worth for length of rise, 9 ft., 457 per fm. In a new, or Eva's rise, in the back of the 40, to the east of the former, and near the boundary, the lode is a good course of ore, worth 3 tons, or 307 per fm. In the 30, east on the south part of the main lode, the lode is of good size, from 2 to 3 ft. wide, and consists of mandic, prian, quartz, and a little rich ore. This drivage has to be extended some 15 fms. further to come in over the course of ore gone through in the 40 below, when a good course of ore will again, in all probability, be met with; and in order to obtain this disastrous object the 30 fathoms level will be pushed on as fast as possible.—No. 2 South Lode: In the 50 east, west of Mayne's cross-cut, the lode is 16 inches wide, and contains good stones of ore. In Blanchard's stope, in back of the 50, east, the lode is worth 1 ton of ore per fm. In Blanchard's stope, in back of the 40, the lode is worth 2 tons of ore per fm.

SOUTH CARN BREA.—T. Glanville, Oct. 9: We shall set to-morrow between 8 and 9 tons of tin. Nothing new in our underground department.

SOUTH CRENNER.—E. Chegwin, Oct. 8: In the flat-rod shaft, sinking below the 105, the lode is 2 ft. wide, producing good stones of copper ore. In the 105, east of flat-rod shaft, the lode is 2 ft. wide, producing ½ ton of ore per fm. Our tribute pitches are without change.—South Mine: In the 51, west of cross-cut, the lode is 3 ft. wide, producing good stones of tin and a little copper ore; the ground favourable for driving. In the 51, east of cross-cut, the lode is 2½ feet wide, producing mandic and spots of tin; ground hard for driving. In the winze sinking in bottom of the 32 the lode is 1½ ft. wide, producing tinstuff; the ground favourable for sinking.

SOUTH WHEAL MARGARET.—W. Richards, Oct. 9: There has been but little done by way of sinking on the gossan lode since last report. The men have been engaged in dividing and casing the shaft, preparatory to commencing to sink with the whim. I hope to get this accomplished to-morrow, which will enable me to push on the sinking with all possible dispatch. I have also commenced operations on a parallel lode, about 70 fathoms to the north of the gossan; this lode at the deepest point seen is about 2 feet 6 inches wide, regular and well defined, producing a little tin, but not enough to value. I intend sinking a shaft on this lode to prove its value. We are also making good progress in the erection of smith's shop, &c., which I hope will be accomplished in a few days.

ST. DAY UNITED.—E. Ralph, J. Cock, J. Gilbert, Oct. 5: In the 162 end, west of Trussell's, the lode is 2 ft. wide, and producing some good ore. In the 144 end east the lode is 18 in. wide, and producing stones of ore, with rather a kindly appearance. The lode in the 144, east of Trussell's shaft, will produce 3 tons of ore per fm. The pitches in this part of the mine are much the same as for some time past.—Billing's: In the 164 end, west of shaft, the lode is 4 ft. wide, worth 657 per fm. In the 164, level end, east of shaft, the lode for the last few feet driving has been disordered by a slide, but hope to get through it in a day or two; the bottom of the end is still very good. We are driving an end west of the winze 7 fms. below the 164, which is 9 fms. east of shaft, as quick as possible for ventilation, this level being so excessively hot. We have driven this week nearly 3 fms., through a lode worth 507 per fm. The lode at present is worth fully as much. We have about 9 feet more to drive and 15 ft. to sink to effect the communication; we hope to accomplish this in a fortnight with good speed; when this is done we shall lay open a valuable piece of ground. In the 154 end east the lode is producing saving work for tin. In the 154 end west the lode is rather disordered. The stops in the back of this level, both east and west, are looking very well. There is no change to notice in any other place in this part of the mine.—Bissoe Pool: We have begun to drive the 162, west of shaft, and hope soon to get under the ore ground gone down in the level above. In the 163 end west the lode is 2 ft. wide, worth 87 per fm., and very kindly.

TOLCARNE.—Oct. 9: Field's Lode: In Field's shaft, sinking below the 30, the lode is 2 feet wide, composed of gossan, spar, and good stones of ore. The lode in the 30 east is 20 in. wide, composed of gossan and spar; in the same level west the lode yields 1 ton of ore per fm. The lode in the 20 east is 1 foot wide, composed of gossan and spar, and letting out a quantity of water. The lode in the 20 west yields 1 ton of ore per fm. The lode in the rise in back of the 10 east is small and unproductive.—Enthonow's Lode: The stops over the back of the adit, west of cross-cut, is worth for tin from 151 to 207 per fm. The ground in the adit cross-cut south and in King's shaft is rather hard.

TREFFRY CONSOLS.—J. Phillips, Oct. 9: Cartwright's shaft is now down 6 fms., in a splendid channel of ground. We shall soon see the mine 10 fathoms from surface, when we, no doubt, shall have a splendid lode for silver-lead ore.—[This week before last this mine was called Tavy Consols instead of Treffry Consols.]

TRELOWETH.—Thos. Richards, Oct. 10: In driving the 144 end, east of the engine-shaft, the lode is worth 57 per fathom on the north part. In the 144 cross-cut, driving south, we have got into the lode about 5 feet, and it is intended to continue the cross-cut driving south until the lode is cut through, and the south ground discovered, to prove which part of the lode is most productive, and that will determine the part to drive west upon. In the winze sinking below the 134, about 11 fathoms east of the shaft, the lode is worth 207 per fathom. In driving south through the lode in the 134 and east the part cut through is worth 82 per fathom. In the 134 end, driving west, the lode is computed to be worth 177 per fathom; this end is not quite under the winze. In the winze sinking below the 124 west the lode is worth 257 per fm.; here we have water, which impedes our progress, although there is only 9 feet to hole to the 134 end. The sumptuous sinking below the 124 fm. level 3 fathoms; this has been idle, but we purpose resuming the sinking of it on setting-day, where the lode is worth 187 per fathom for copper ore. The stops east of sumptuous sinking is worth 257 per fathom. The stops west of sumptuous sinking is worth 187 per fathom. The lode in the 124, driving south, is composed of copper ore and mandic, but not rich. The 124 end east is without much alteration.

TRELYON CONSOLS.—R. James, E. Pooley, Oct. 9: In the 40, west of new shaft, the lode is not so good as when reported on last; present value 67 per fm. In the 40 east the lode is worth 77 per fm. In the 30 and 20 west the lode is without change. The stops are yielding about the same quantity of tinstuff for some time past.

TRESELLYN AND SCADDICK CONSOLS.—J. Sparro, Oct. 7: Treselyn: The engine-shaft is sinking with all possible speed by nine men, at 11s. 10s. per fathom for the month. I hope, if the ground continues as at present, we shall reach the 20 in about nine weeks: this is as cheap and speedy a shaft for sinking as any I know of in the country; the nature of the ground in every respect is favourable for a course of ore at the intersection of the lodes. We are hauling the heads from the shaft by the aid of one horse, but if the ground holds good I expect we shall be obliged to engage another, as at present the horse is in work with the exception of a few hours night and day. Our machinery altogether works well. The increase of the water in the night is not so difficult as I expected. We need not work our wheel more than 2½ revolutions per minute; but it is reasonable to expect at the intersection of the lodes that the water will increase.—Scaddick: We are rising in the back of the adit level, so as to lay open stops, by four men; this is going up under the bunches of tin gone down, and I hope we are laying open good tin ground for stamps. Our stamps are now engaged in beating down its bed. We shall commence stamping tin in the course of a day or two. The lodes on the top of Scaddick Hill still produce some rich tin, and we have three

plies of splendid tinstuff ready for the stamps. I think we shall find this tin of the best quality, but I shall be able to inform you more respecting it after we commence stamping. It is my opinion that we have another lode north in the Scaddick ground; judging from the stones thrown up at the surface, it will be found large, and I have no doubt rich; we have two men on discovery at this point. The same number of men are employed in the mines as stated in my last.

TREWEATHA.—T. Foot, J. Scoble, Oct. 8: The 30 south has been driven 3 fms. 5 ft. 6 in. during the past month. The lode in the end is 3 ft. wide, and will produce from 2 to 3 cwt. of lead per fm.; we have set to drive north at this level on the course of the lode. We have also set a cross-cut to drive east for the purpose of ascertaining if Treweatha little lode is in that direction. The lode in the 15 south is 18 in. wide, producing saving work, and looking more promising than for the last two months. The stops in the back of this level are worth 3 cwt. of lead per fm. We have about 8 tons of lead driven and undressed at surface.

TRUMPET UNITED.—G. E. Odgers, Oct. 5: The 25 west to six men, at 71 per fm., the lode in which is small, but yielding a little tin. The 25 east to two men, at 27. 6s. per fathom; lode small, although yielding a little tin. A plat and barrow-road in the 25 to two men, at 51. The stops above the 25 east to two men, at 17. 1s. per fathom; lode worth 31. 10s. per fathom. The stops above the 15 east to one man, at 18s. per fathom; lode worth 50s. per fathom. The 15 west to four men, at 77. per fathom; lode is 1 ft. wide, with stones of tin. We have about 8 tons of lead driven and undressed at surface.

TRUSSELL.—T. Foot, J. Scoble, Oct. 8: The 30 south has been driven 3 fms. 5 ft. 6 in. during the past month. The lode in the end is 3 ft. wide, and will produce from 2 to 3 cwt. of lead per fm.; we have set to drive north at this level on the course of the lode. We have also set a cross-cut to drive east for the purpose of ascertaining if Treweatha little lode is in that direction. The lode in the 15 south is 18 in. wide, producing saving work, and looking more promising than for the last two months. The stops in the back of this level are worth 3 cwt. of lead per fm. We have about 8 tons of lead driven and undressed at surface.

UNITED MINES (Favistock).—John Tucker, Oct. 9: We have cut the north lode in the 72; the men are now driving through it; it is a very strong promising lode, producing saving work for tin. I shall be able to speak more definitely when we are through it. The 60 west is yielding good stones of tin. The lode in the 60 east is 141 wide, producing good stamping work, and likely to improve.

WENTNOE (Pantans).—T. Pierce, Oct. 10: Bradley's shaft is without alteration since last report, and is still in strong shale and beds of blue stone.—Groveson Shaft:

The 55 yard level is in a strong vein 4 feet wide, composed of spar, shale, and lead ore.

WEST BASSET.—Wm. Roberts, Oct. 8: I cannot speak of any improvement in the tributary bargains since last reported. The tribute department is looking very favourable.

WEST FOWLEY.—F. Puckay, E. Dunstan, Oct. 7: Western, or Tin Part: In the 125, west of Puckay's north shaft, on Puckay's lode, the lode is 5 ft. wide, worth 151 per fm.; the 20, west of flat-rod shaft, to four men, at 37. 5s. per fathom; lode nearly 1 ft. wide, alive in

in, and kindly in appearance.

WHEAL HARRIET.—S. Williams, Oct. 5: I have set to sink the engine-shaft by nine men, 5 fms., at 17. per fm. The lode in the 115, east end, is 1½ ft. wide, producing a little tin, but not to value. The lode in the 100, east end, is 2 ft. wide, and at present in a disordered state by a large slide we have met with here. The lode in the 100 is not producing so much copper and tin, and is now worth 81. per fm.

WHEAL HENRY.—E. Ralph, J. Cox, J. Gilbert, Oct. 5: The winze is sunk 6½ fms. below the 50, where the lode is 2 ft. wide, producing some good tinstuff. The stops in back of the 50 is worth 87 per fm., and stopping at 37. 10s.

WHEAL HOPE.—W. H. Reynolds, Oct. 9: The pitch at the 14 is yielding excellent work for tin, a pile of which will be drawn to surface to-morrow. The lead pitch at the 14, also, is yielding good work for lead. In the 14 cross-cut we have driven 4 fms., and the last 6 ft. is in hard spar, capel, &c., so that we expect soon to cut the lead-producing part of the lode. The old lead always had a hard capel by the side where most productive, so that we regard the capel in the cross-cut as a favourable indication of the south lode.

WHEAL KITTY (Lelant).—W. Williams, Oct. 10: Engine-shaft Lode: The lode in the 160 end is producing a little tin, not of much value. We have set a cross-cut to the west of the engine-shaft at the 150. We consider this to be a good speculation.

The lode in the 140 end is worth 51 per fathom; price for driving, 27. per fm.—Gowan Lode: The lode in Wickett's shaft, sinking below the 40, is worth 37. per fm. The lode in the 40 end, east of Wickett's shaft, is worth 37. per fm. Philip's shaft will resume driving the 40 and east in a day or two, where the lode is worth 51. per fm.

WEST SILVER BANK.—A. Francis, Oct. 8: The north lode in this mine continues to produce large quantities of ore, such as the specimens already sent to your office, and with which I am glad to learn you are so well pleased. I think you exercise a sound discrimination in ordering a water-wheel and machinery necessary for pumping, so as to enable us to sink down on this great course of ore at once; for let me ask you, what is the use of delaying, when every fathom of ground will turn out more than 307 worth of ore? whilst the cost for sinking will not exceed 10/-, thus leaving two-thirds profit in the most expensive operations of mining—that is, carrying down an engine-shaft. Such a thing has not been heard of in this county for some time past, and you may guess what profit will accrue when we come to drive and stop on such a valuable lode, which looks rich for silver, but as yet we have not had it assayed. In conclusion, I must congratulate the proprietors, and also Col. Powell, upon this piece of good fortune in opening new ground on his very extensive possessions in this great, but only partially explored, mining district.

WEST SOUTH CARADON.—Oct. 5: We are daily expecting to hole Page's shaft to the adit level, after which we shall at once commence driving, as mentioned in a former report.

WEST WHEAL JANE.—J. Tonkin, J. Smith, Oct. 5: We sold yesterday 317, worth £100, of lead for sinking, and retained about 50f. for our stamps. We hope to sell net weekly about 150/- worth of black tin. There is not much alteration in our tributary bargains since we wrote you last. In the 70 west the lode produces a little tin. In the 50 west the lode is not so wide as it was at our last report; it is now worth about 101. per fm. In the 40 west the lode is improving for the present, now producing saving work. In the winze under the 30 west the lode is 3 ft. wide, worth 127. per fm. for tin. In the 100 east the lode is 4 ft. wide, worth 101. per fm. for tin. In the 100 east, on the north lode, is driven 25 fms.; the lode is about 11½ ft. wide, composed of spar, mandic, peach, and tin, worth 151 per fm.

WEST SHARP TOR.—Wm. Richards, Oct. 7: Having cut through the lode in the 150 cross-cut we shall commence to open out east and west on the course of the north part on Wednesday next. The ground in the 162, by the side of the lode, is favourable for progress; we hope to commence to cross-cut the lode to-morrow week.

WEST WHEAL TREVELYAN.—J. D. Osborn, Oct. 5: Cater's engine-shaft is sunk 2 fms. below the 58, on the south part of the lode. In the 58 end west there has not been any lode taken down since last reported. The 48 end west is worth for ore 67. per fm. The stops in back of said lode are worth 87. per fm. The stops in back of said level west are worth 57. per fm. No. 3 winze, sinking below the 48, is worth 257. per fm. In the cross

[OCT. 12, 1861.]

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

EAST WHEAL BASSET.—There has been so many reports about this mine of late, and so many enquiries, that I shall feel obliged if you will insert the following:—The 50 east, on the south lode, is worth from 30/- to 40/- per fm.; the ore is so very rich that I cannot say to 5/- per ton its value. The 90 east and west are improved, with occasional stones of ore. Nothing new in any other part.—W. RICHARDS: *Redruth, Oct. 10.*

MOUNT PLEASANT LEAD MINE (Mold).—The directors were able, on the 1st inst., to make a further dividend of 1/- per share, making 2/- 10s. since June 30. The new cuttings at the northern part of the mine are extremely promising, and the prospects in the southern drivings continue very good.

WHEAL SETON.—An important communication has this morning been received of the present state of this mine, which is to the effect that an improvement of an important character has taken place—that the 140, east of Tilly's shaft, is worth 3 tons per fm., value 10/- per ton; the 70 west, on south lode, 8 tons per fm.; the 100 west producing 10 tons per fathom. The other points of operation are looking well.

GREAT CRINNIS.—The shaftmen are cutting into the lode in the 120'; it is composed of congenital spar and good stones of rich copper ore; this is a great improvement, as the lode was composed wholly of hard caper over in the 100 fm. level. It is expected that when the 120 is driven west under the improvement in the 100 good results will follow. The lode in the 100 west is still from 8 to 10 ft. wide, grey throughout, with a leader on the north wall 1½ ft. wide, good work for copper ore, with every prospect of improvement. The winze below the 100 is being carried for 6 ft. wide, grey throughout, though the lode is much larger; there is here also a leader on the north part 1½ ft. wide, good copper ore. The lode in the three points named is composed of soft spar, prian, peach, and everything which could be desired for copper ore; should this lode strike into ore, as is expected weekly by the agents, it would be the greatest discovery made for many years.

CODDURROW has also improved. The 165 east is worth 300/- per fm. The shaft is also worth 300/- or more.

OLD TOLGUS.—This mine is improving weekly; the ground and the lode have much improved in the last month. The improvement is progressive as the ends are driven west. The 32, 42, and 52 are all producing good copper ore, and each end is improving. The manager has a high opinion of the prospects of the mine. An improvement in either of the ends would cause a great advance in the shares, from the altered character of the ground and lode.

SOUTH TOLGUS.—This mine has materially improved, in consequence of which the shares have advanced to 40/-.

TREGARDOCK MINE.—A parcel of lead will be sampled from this mine in the course of the week. In the cross-cut from the north to the south lode they have just met with the north wall of the lode, and there is every reason to expect a good lead lode when cut through. In the end driving east, on the north lode, there is a good branch of lead, which appears to be holding down, it being best in the bottom of the level. This mine will come out well, at least judging from present appearances. Capt. W. Richards, of Redruth, is the manager, which is a sufficient guarantee for its reliability and good management.

GREAT WHEEL FORTUNE.—The prospects of this mine are not so good, the 58 and 68 fm. levels both having greatly fallen off.

WHEAL HARRIS.—The parish of Lifton seems at last destined to become a mining district, if we may judge from the beautiful specimens of silver-lead just brought in from this mine. I am informed they are from a branch met with in driving a cross-cut towards the main lode; and as this branch is dipping towards the lode, great things may be expected of it when intersected. The few shareholders who are carrying on this concern deserve success for their praiseworthy endeavours to open up a new mining district, and for the otherwise general good they confer.

SORTRIDGE.—The prospects of this mine have been greatly improved, and in future there is every reason to believe that steady monthly profits will be realised.

EAST CARN BREA is looking exceedingly well.

BULLER AND BASSET.—The manager writes:—"In the 80 west we have a very kindly lode; indeed, how it does not make a course of ore I am at a loss to know. It is made up of everything kindly that could be desired without ore. The granite is also much of the same character as is found about the courses of ore in this district."

CUDDRUA.—The lode at Walker's shaft, below the 60, is producing fine rocks of tin. The top part of the lode herein is 3 ft. wide. The prospects in and about this shaft are of the most cheering character. A parcel of 100 tons of copper ore has been sampled this week.

TRELLAWYNY.—The 75 tons of crop lead brought 24/- 12s. 6d. per ton, and the 50 tons of seconds 71. 7s. per ton, which will leave upwards of 600/- profit on the quarter's working. The mine continues to open up well, and the samplings will continue to increase, which is the best test of the intrinsic value of the mine. Dividends will soon be resumed.

NORTH TRESKERBY.—The bottom level east is being anxiously watched by the local shareholders, in consequence of its near approach to the run of ore ground passed over in the 57 east. This level passed through ore ground 60 fms. in length, worth from 15/- to 20/- per fathom on an average. As the price for driving is only from 2/- 10s. to 3/- per fathom, it is evident that a discovery in the bottom level would cause a very rapid rise. Out-adventurers should firmly hold for awhile, and satisfy themselves of the correctness of the foregoing statements by having the mine inspected by competent persons before parting with their shares.

EAST TREVENEN.—Highburrow shaft is expected to be holed to the deep adit level in about a fortnight from this time, when the ground in the back of the adit will be let on moderate tributes, which will enable the agents to work the mine without troubling the shareholders for further calls. The tin ground laid open in the back of the deep adit level is valued at from 900/- to 1000/-, but the best of the tin ground is situated to the west of Highburrow shaft, which the deep adit level is now being got under with all dispatch.

NORTH DOWNS.—The 60 east is just beginning to show signs of entering on the same channel of ground that proved so productive in the level above. There is every reasonable expectation of a great improvement here shortly. There is also decided improvement in the 40, going east, where there is a good lode of ore coming in.

DULTA TIN MINING COMPANY.—At a special meeting of shareholders, held in Liverpool, on Sept. 27, the resolution for increasing the capital of the company to 5000/-, in 5000 shares of 1/- each (passed at the extraordinary general meeting, July 4), was confirmed. A resolution was then passed that 2000 of the newly-created shares be kept in abeyance, the remaining 952 to be allotted at the discretion of the directors.

WEST SILVER BANK.—Referring to the discovery reported in last week's Journal, I have been to the office, and examined the samples, and I must say I have not seen a finer piece of ore broken off any lode in Cardiganshire for a great number of years. The quality is excellent, and it is granulated like the best silver-lead ore of the district, but the quantity of silver it contains is not ascertainable by the eye, which is not a sufficiently perfect instrument for this purpose; its true value can only be found by assaying it. However, the solidity and whole appearance of the lead both in and broken from the rock is admirable, and the best authorities have, in my presence, expressed themselves as being delighted with it.

NORTH LAXEY.—The length or ore ground passed through in the 12 was only about 11 fms., and in the 27 it has increased to 30 fms. In a short time the new shaft will be down to the 38.

OSSEDD MINE (Whitford).—This mine never looked so well as at present—the sale of ore at Holywell this week (the produce of one month) is the best guarantee of the bona fides of the property; and when it is remembered that it has already, in less than two years, returned, in dividends 1000 per cent. on the original outlay, and that it is improving as a greater depth is attained, this is undoubtedly one of the best young dividend mines in the principality. The present parcel of ore was chiefly stoned from the back of the 50 yard level, at 18s. per ton, and is re-set for the ensuing month at the same price. Sinking below the 50 is 1½ ft. wide, with good ore. The pump will be lengthened in a week or two to the 80 yard level, to enable the works to be prosecuted at a greater depth, when a splendid mine will be the result, or I am greatly mistaken in my opinion. Capitalists would do well to turn their attention to this comparatively untried district; let them investigate for themselves, and they will find that the locality abounds in mineral wealth, which only requires the combination of money, energy, and science to make it one of the most profitable, as I think it will prove to be one of the most productive, lead mining districts of the United Kingdom.

EAST CARDON.—The latest reports from this mine show important improvements in the lode, both at the 50 and 60 fathom levels east. At the meeting last week a dividend of 12. 6d. per share was declared, and a larger balance in hand carried over. It is stated that another steam-engine will be shortly ordered for the new shaft in the north part of the sett, where great results in depth are expected. The will, however, no doubt be an abundance of ore to pay for this engine, &c., without diminishing the present dividends.

EAST WHEAL ROSE DISTRICT—NEWLYN EAST, AND LOWER ST. COLUMB.—It is undeniable that EAST WHEAL ROSE was the richest mine in Cornwall or Devonshire for many years, and that the locality for miles around contains lodes of the greatest promise, embedded in a beautiful channel of lead-bearing ground, which will, no doubt, shortly be developed, and found to produce silver-lead in abundance. There can be but one opinion of this district—that it is a very rich one for the production of silver-lead, and there are many pieces worthy of trial; yet until very recently it has been much neglected. Preliminary trials have been made, but, these being so limited, nothing of importance was discovered. About three of four months ago a sett was held, and worked a little, by the late Capt. J. Champion, of East Wheal Rose and Cargot Mine. This mine is now being worked also on a limited scale by two or three people, as I am informed, from Plymouth, on an east and west lode. This lode has been laid open on the back for about 30 or 40 fathoms, and in almost every pit it is producing some good stones of lead; in some places value could, I think, be set on it. The deepest pit is about 2 fms.: here the lode does not contain so much lead—scarcely any; but the lode, nevertheless, has a good appearance, being very compact, and composed of light quartz, prian, and flookan, spotted with lead, and will, in my opinion, produce silver-lead in large quantities, particularly near the north and south lodes. By way of proving the value of this lode, a trial shaft is now being sunk by the aid of a horse-engine, attached to which is a small lift. The shaft is down 5 fms.; this is about 5 or 6 fms. south of the lode, which underlies south: about 2 ft. in 1 fm. This shaft will be sunk to a depth of 10 fms. or 12 fms., when a cross-cut will be put out to the lode; hence the value at this depth. There are said to be north and south lodes in the sett that will by-and-bye be opened up, and, although the lode now alluded to is embedded in a beautiful channel of lead-bearing ground, I am of opinion the north and south lodes will be the main object, the east and west lodes proving, no doubt, feeders to them. This mine is now working under the name of Treffry Consols, I should say the land belongs to the Rev. Mr. Treffry, of Fowey. In the Mining Journal of Sept. 14, under the heading of "Mining Notabilia," a correspondent writes:—"The lodes of East Wheal Rose ran through this sett—Treffry. The sett is fully one mile long, by 600 fms. wide." This is incorrect, as the sett already under grant, or arranged to be purchased from the Messrs. Champion, is very small. Promises from the many intermixed landowners, under certain arrangements, have been made, and an offer from the Crown from an application made. For this grant a deposit must be made of 150/- or 200/-, if I am correctly informed, before a sett can be had. This sum for land damage only seen large, and ought, I think, to be much less. There are many who would willingly deposit a less sum—sufficient to pay for all damage that might be done, and spend the remainder exploring the lodes, and who, after depositing the 200/-, had but little left for working capital. This I fear is the case with the present Treffry Company. I do not offer these remarks by way of damaging the property, and hope I may be mistaken. I think, as before said, the deposit should be much less. I hope the Crown authorities may see these remarks, and be induced to mitigate the amount; if so, I am confident it would be better for all. On the other hand, if by making such small trials a company should be formed, and a 21 years' lease be ordered, there could be no objection then in demanding a sufficient sum to pay all damages that may accrue. The first 12 months' explorations are generally shallow shodding and a trial shaft or two, and by doing such the damages do not on an average exceed 20/-.

I am, therefore, informed, and as will be seen, that the Treffry sett so far is small, and the lodes from

East Wheal Rose, I am confident in my own opinion, as also of many other experienced men, do not pass through the sett, but go in a different direction. I cannot think the statement alluded to originated from either of the parties interested; if so, no doubt Capt. Phillips, who certainly knows better, will say so, or otherwise, in his next report. There are many mining sets in this locality that are well worthy the attention of capitalists. Indeed, I pronounce it to be a first-rate mining district, greatly neglected. Very little capital, comparatively speaking, will prove several excellent pieces of mining ground, which I hope shortly to call your attention to. I am confident ere long we shall see mining to a great extent, and large quantities of lead carted to Quay from this locality. Of this I am as confident as that I am now writing on the subject. I am only surprised the district has been so neglected. Many people are opposed to new districts, but there must be new before old, and there must be some people to open up those new districts, who are not, I am sorry to say, sufficiently supported. I enclose a report that has been placed in my hands, made by a good authority, about this locality, which will confirm my opinion, and also that of many others that the East Wheal Rose lodes cannot possibly go through Treffry Consols.—NEWQUAY: Oct. 10.

WHEAL GRIFFS still continues to look well. Annie's engine-shaft has been resunk in a good lode, worth from 16/- to 20/- per fathom; and shortly Georgia shaft will be resunk sinking below adit, or 40 fm. level, in a lode worth 40/- to 50/- per fm. In this level the lode has been driven 14 to 16 fathoms east and west, worth on an average 40/- to 45/- per fm. The erection of the engine-house for stamps, &c., is progressing satisfactorily. Shares are likely to see a high figure.

WHEAL ARTHUR.—It is satisfactory to learn that the long-desired object has been attained in the communication of the 50 fm. level between this and the adjoining mine (Wheal Edward), which will be of great benefit to both mines. Operations will now be confined to working on the different lodes and points of operation, which are all producing ore. The 50 west is worth 10/- per fathom; the 50 east 8/- to 10/- per fm.; Burly's stoves, 1½ to 2 tons; and Palmer's, 1 ton. Other points will be commenced next week in equally productive places, and there is no doubt but that shares in this mine will see a good price.

MINING IN CARDIGANSHIRE.—In last week's Journal allusion was made to a discovery of an important character having been made in a mineral property known as the West Silver Bank. It is of little consequence by whom such discoveries are made, whether by private individuals or by means of associated capital, its importance remains the same, and every such discovery, while it increases the wealth of the nation, should be hailed with satisfaction by every well-wisher of the country's weal. The property of the West Silver Bank is situated about eight or nine miles from Aberystwyth, with the turnpike road from that town to the Devil's Bridge intersecting the sett. On the north side of the property there is a dingle, from which, in course of time, deep mining operations may be extended in the form of adits, and there is no doubt this favourable locality will soon be filled with machinery, resounding with activity on its every side, as once did the great works of Goginan, which from a solitary hamlet became a large village, and is now inhabited by a thousand miners. Twenty years ago Goginan was the most lonely corner in Cardiganshire, but the works of stamping and crushing soon filled the valley with the echo of their sounds, and now the district is one of the most prosperous in Cardiganshire. Upon the north side of the spot where the discovery has recently been made at the West Silver Bank, are found the well-known silver-lead mines of Goginan and East Darren, formerly called Cwm Symlog, the income from which enabled Sir Hugh Myddleton to construct the New River. On the south are the great mines of Frongoch, Grogwynion, Loglas, and others—from all of which large profits continue to be realized. It seems a most anomalous fact that, after this district has been worked for hundreds of years there should still be discovered beds of ore producing such wealth, that to raise the metal requires the outlay of but a fraction of its value. Fifty years ago Frongoch Mine was discovered, yielding its ores close to the surface, similar to the discovery recently made at West Silver Bank, and is now making a profit estimated variously at from 7000/- to 10,000/- per annum. There can be no doubt, by the practical authorities who have recently visited West Silver Bank, that from the great value of the lode coming up to the surface, where it yields a large quantity of ore, there is reason to assume it will prove a rich and lasting mine. At the surface the vein contained a fine mixture of spar and gossan, which in 18 feet increased to a solid mass of ore. A surface plan, with transverse section, of the above mine will appear in our next issue.

THE WEATHER.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In my letter in the *Mining Journal* of Sept. 28, in reference to the weather, I stated if we had a thunder-storm about the 7th it would solve a great meteorological problem. Severe lightning occurred on the 8th in the north-east of London. I also stated we should have some rough weather on the 11th, and here it is. The same phenomenon will also again occur on the 13th inst., Saturday night and Sunday. From the 3d inst. the temperature has been unusually light for this time of the year, and leads me to expect the visit of another comet. I foretold the approach of the late comet with great accuracy, full six weeks before it was visible; and I have addressed the following to Mr. Hind on this interesting subject.

26, Throgmorton-street, Oct. 11. G. SHEPHERD, C.E., Author of the *Climate of England*.

26, Throgmorton-street, Oct. 3.—Sir: The result of my observations, so far as they have gone, lead me to expect the visit of another comet about the middle or near the end of November next, if not before that time. I would add, that if a comet is discovered before November, in all probability it will be a small one; but if not until after the time I have named it will be one of considerable magnitude.—G. SHEPHERD, C.E. To J. R. Hind, Esq.

THE PROGRESS OF SLATE COMPANIES.

As we have always devoted considerable attention and space to the question of the production of slate, both as a commercial commodity and as a medium for investment, it is gratifying to find that nearly, if not the whole, of the companies recently formed for the development of slate quarries are progressing in every respect satisfactorily. Notwithstanding the large supply of slate into the market, it is still altogether inadequate to meet the continually increasing demand, in consequence of which several of the manufacturers are unable to fulfil their orders. By the success which has almost uniformly attended the several slate companies, it would appear that the public are fully alive to the importance of the subject; and as it is a matter which will, in all probability, continue to engage a large amount of attention, we hope those connected with the different enterprises, both public and private, will aid us in presenting to the public from time to time a complete summary of their position and prospects.

The GREAT MOELWYN COMPANY have within the past few days received a satisfactory communication from Capt. W. Griffiths, which informs the proprietors that the prospects in No. 1 level are of an encouraging character. As they gained the cover by driving on the back, the quality of the slate became finer, the split and colour being equal to any in Festiniog. All that is now wanting to open up an inexhaustible supply of slate from this part of the work is the driving of the level to the overhanging trap, which, being a distance of about 40 yards, will be a work of about three weeks. It will also be necessary to drive the No. 2 level to meet the trap immediately over No. 1; and then roof Nos. 1 and 2, and so open out the first chamber.

The CRICICHT COMPANY is progressing very satisfactorily. Between 40 and 50 men are employed in cutting more extensively into the vein, and the slate improves in quality as the depth increases. Mr. G. L. Fuller, of Lombard-street, states that he has seldom seen better slate produced at so short a distance from the surface. The grant of the quarry comprises an area of about 11½ acre square: and it was not known until within the last few days that a second opening had been made. Upon examination it was proved that it contained slate quite equal to that in the other part of the property. This is the more important, inasmuch as it shows the vein intersects the whole of the grant.

THE SALT TRADE.—The monthly return of the Liverpool and Cheshire Salt Chamber of Commerce shows that during September the exports from Liverpool, Birkenhead, and Runcorn were 34,848 tons, against 47,176 tons during the corresponding month of last year. This makes the exports for the nine months 512,429 tons, against 504,257 tons during the corresponding period of last year. The places to which the salt was exported were—To the United States, 12,714 tons; British America, 2977 tons; South America, 701 tons; Calcutta, 9308 tons; Baltic and North of Europe, 3148 tons; Australia, 1584 tons; and West Indies and Africa, 2417 tons. To Holland and Belgium there was exported during the month 2008 tons of rock salt; and from Runcorn, 4993 tons of white salt, and 548 tons of

Stock in Holland. Towards next sale. Stock here. Total. Slabs. Tons. Slabs. Tons. Tons.

1861	.....	81,750	2530	30,723	950	1020	4500
1860	.....	88,072	2730	32,989	1020	650	4400
1859	.....	85,477	2694	34,831	1096	760	4550
1858	.....	99,235	3124	26,590	835	900	4960

The sum of Straits tin now afloat for Great Britain is 1075 tons, against 555 last year.

THE SPELTER TRADE.—During the last two months spelter has been subjected to many alterations; when prices were ruling between 17/- and 17. 5s. neither

A large business was done at successively 18½, 19, and 19½ c., and the quotation of today is 19½ to 20 c. The latter price has been paid for Minnesota, and also for other Lake for delivery. The sales have been mainly for export and on speculation, while our manufacturers continue to limit their operations to immediate necessities. It seems that the immense shipments of this year leave a comparatively small supply for the wants of the domestic and foreign trade from now to next spring. The exports since January 1 amount to 11,800,000 lbs., against 5,750,000 lbs. during the whole year 1860. The arrivals of Lake copper are just now moderate, and the Baltimore smelters do not work to their full capacity. The Minnesota Company do not offer their make at all, and some other companies withhold their stocks likewise. The exports of the last four weeks are as follows, viz.:—From New York to Havre, 283,000 lbs.; ditto, 750,000 lbs. (China); from New York to London, 135,300 lbs.; from New York to Hamburg, 176,000 lbs.; from New York to Antwerp, 34,000 lbs.=1,875,300 lbs.—Lead has again advanced in price. We quote Spanish and German, \$4½; galena, \$5 65. The stock of foreign is estimated at 3700 tons.—WINTERHOFF AND CO.

The standard for copper ore last week was considerably better than it was in the corresponding week of 1860, though in the intermediate time it dropped very considerably, and caused great alarm to the miner. On October 4, 1860, the standard, or price per ton of copper in the ore, was 129½ 14s., at a produce of 6½ per cent. Last week it was 134½ 10s., produce due 6½ per cent. At the sales we have taken for comparison the same group of Camborne mines sold their produce. On Oct. 4, 1860, they sold 3967 tons, at an average price of 5l. 4s. per ton, and last week 3704 tons, at an average of 5l. 13s. per ton. The average price of the ore, according to the different standards, therefore, shows that the mines got 9s. per ton more now than they did 12 months ago. Our readers are well aware that in the spring the standard began to decline until, in July, it reached 119½ 18s. It is worthy of remark here that at the monthly sale of the same group of mines, in July, they realised on an average 5l. 13s. per ton for their ores, at a standard of 119½ 18s., the same price they got last week, at a standard of 134½ 10s.! And in seeking for an explanation of this, we find that, whereas last week they sold 3704 tons, they only sold 2821 tons in July, showing that by keeping back their poor ores when the standard was low, they get a higher price on the average. Tin ore, 12 months ago, was about 80s. per ton, and the same quality has since been down to 67s. per ton. It is now up again to 73s. or 75s., and advancing. The mines selling lead during the same period are getting about 1s. per ton less for their produce now than 12 months ago. On the whole, therefore, the appearance of the metal market, particularly for copper and tin, are encouraging for the miner, and will be of some interest to the investor and speculator.

In the MINING SHARE MARKET there has been a fair average amount of business transacted, and prices generally have kept pretty steady. In one or two cases an advance has taken place. East Caradon shares advanced to 27, ex div., and leave off 26½ to 27½; at the meeting, held at Salisbury, the accounts showed a balance in hand of 6044l. 14s. 7d., out of which a dividend of 12s. 6d. per share (3840l.) was declared, leaving a balance in hand of 2204l. 14s. 7d., less 334l. 13s. 3d. for dues unpaid. The accounts are not made out so as to show the profit at a glance, and in this way might be improved, but it appears to have been 4405l. 14s. 8d. in the three months. The report, which is of a very satisfactory character, shows that the 60 east, on the caunter lode, is worth 35l. per fm.; west, 25l. per fm.; south part, 20l. per fm. In the 50 east the lode is worth 75l. per fm. The agent estimates that, notwithstanding this large profit, the reserves in the mine have been increased by at least 20,000t. in the three months, and the mine has more than fulfilled the promise of our remarks in July last, which, at the time, was considered by some people as too sanguine. Marke Valley, 10½ to 10¾, ex div.; at the meeting, held on the same day as East Caradon, a dividend of 6s. per share (2250l.) was declared, leaving 3121l. 16s. 8d. balance of assets, after payment of it. The report of the mine is favourable, and it continues, the agent says, "to look quite as prosperous as at any former time." West Rose Down, 14 to 16; at the meeting the accounts showed 713l. 10s. 4d. in hand, and the mine progressing very satisfactorily. Wheal Ludcott, 2½ to 2½; at the meeting a dividend of 4s. per share was declared. The accounts show a profit of 1271l. 3s. 11d., and after payment of dividend, a balance of 519l. 13s. 3d. in hand. The mine is reported as looking as well as at any previous period. Alfred Consols, 20s. to 22s. 6d., and have been more required for Camborne Vean, 2½ to 2½; Carn Camborne, 23s. to 25s.; Copper Hill, 110 to 115; Craddock Moor, 22 to 24; Ding Dong, 14½ to 15½; Herodsfoot, 33½ to 34½; at the meeting, held on the 1st instant, the profit on the four months ending August was 1735l. 2s., and a dividend of 1s. 10s. per share (1792l.) declared. The statement of assets over liabilities is shown to be 2862l. 18s. 7d. The mine is reported as looking well, and the agent hopes to keep up the returns. Drake Walls, 17s. 6d. to 20s.; East Alfred, 32s. 6d. to 35s.; East Russell, 3 to 3½. Wheal Seton shares have been in great demand, and advanced the latter part of the week, leaving off 82½ to 87½; the lode in the 140 is worth 6 tons per fathom. Great Wheal Fortune, 13½ to 13¾, and in request; 18 more heads of stamps have been set to work this week. At the 68 fm. level, east of Painter's, there have been 20 to 30 fathoms of good tin ground, and the 78 will soon be in. East Wheal Grenville, 37s. 6d. to 40s. Grambler and St. Aubyn shares have advanced from 12 to 14, 15. Great South Tolgs, 4½ to 4¾. Hingston Down shares, after reaching 4, declined, and leave off 3½ to 3¾. Lady Bertha, 15s. to 17s. North Bassett shares have declined to 4½, 5; North Downs, 5 to 5½. Condurrow shares have advanced to 80, 85, and in demand; at the meeting, we understand, the accounts showed a debt of above 3000l., and the report of the agents value the ends, shafts, and winzes in 640l. per fm., and stope, altogether, 397l. North Minera, 21s. to 23s.; North Robert, 15s. to 17s.; North Treskerby, 23 to 25; Par Consols, 8 to 8½; Providence Mines, 40 to 42; Rosewall Hill and Ransom United, 25s. to 27s. Wendron Consols, 12 to 14; at the meeting the accounts showed a balance in favour of the adventurers of 630l. 16s.; the tin sold in the quarter realised 4533l. 3s. 10d.; and since the meeting, held on the 7th inst., 30 tons more, realising 2113l. 7s. 6d., have been sold. Had the price of tin been the same during the quarter as it was in 1860, the ores would have realised about 800l. more than they did, which would have been a good dividend; as tin, however, is now rising, we may look for better results in future. Rosewarne United, 22 to 24, South Bassett shares in request at 14 to 16. South Tolgs shares advanced to 40, 42½, and leave off 38 to 40. St. Ives Consols, 30 to 32½; Stray Park, 27 to 29; Tin croft, 6½ to 6¾; West Caradon, 38 to 40; West Polmear, 11s. to 13s.; West Seton, 310 to 320. East Bassett shares declined to 62, sellers, and suddenly advanced to 75, but leave off 65 to 70; the rise was owing to an improvement in the 80 east, which was valued at 30l. to 40l. per fm.; this end, however, must be near the boundary of Copper Hill; but the 90 has also improved. West Trevethan, 2½ to 2½; the mine has improved in the 48. Redmoor, 3s. 6d. to 4s. 6d.; at the meeting the accounts for five months showed a balance of 172l. 15s. 9d. against the 14½ to 15s. 10d. at the low price; there are on the floors 3 tons more, and 18 men working at an average tribute of 11s. in 17.

Great Retallack shares have been in more demand, and leave off 22s. to 24s.; the prospects for lead are improving daily, and the blonde pitches turning out well. Wheal Arthur, 13s. to 15s.; at the meeting a call of 1s. per share was made, and the report satisfactory. The agent hopes to increase the returns, so that the mine will be in a good position in a short time. Wheal Bassett, 87½ to 92½; Wheal Edward, 37s. 6d. to 40s.; Wheal Grenville, 37s. to 39s. Wheal Hope, ½ to 1½; more pitches have been set for tin, and the prospects very encouraging. Wheal Grylls, 8½ to 8¾; Wheal Margaret, 40 to 42; Wheal Trelawny, 14½ to 15½. Wheal Unity, 16s. to 18s.; it is understood these shares have been heavily "beared," owing to the delay in cutting the lode in the 75, and to this the decline in price is owing. The agent, by his report, daily expects to cut it, and if met with of a favourable character there may be a reaction.

Great Crinnis, ½ to 1½; the lode has been cut into in the 120, and found to be composed of a very congenial spar, and containing some good stones of copper ore; much improved since cut through in the 110. South Carn Brea, 3½ to 3¾; Wheal Uny, 4½ to 4¾. Long Rake, 11 to 13; the mine sold on Thursday 25 tons of lead ore, at 12½ 14s. 6d. per ton. Bryn Gwrig, 23 to 25; the mine has sold 30 tons for the month, at 12½ 16s. per ton; the lode in the shaft is worth 5 tons of lead per fm. East Carn Brea, 9½ to 9¾, and in demand; the winze has further improved. Sortridge Consols have been in request, and advanced from 10s. to 14s. 15s.

On the Stock Exchange transactions in Mining Shares have been to a moderate extent during the week. The following prices were officially recorded in British Mining Shares:—East Bassett, 62, 64, 68, 70, 77, 79, 78; Stray Park, 28½; East Wheal Russell, 8; Great Wheal Vor, 5½, 5¾; Hingston Down, 33, 35, 36, 38, 39; North Wheal Bassett, 54, 54, 55, 56, 4½; Sortridge Consols, ½; Alfred Consols, 1, 1; East Caradon, 27, 28, 27½; North Downs, 5. In Colonial Mining Shares the prices were:—Bon Accord, 1, 1, 1; Port Phillip, 1; Scottish Australian, ½; Great Northern Copper of South Australia, 1½; Australian, 1. In Foreign Mining Shares

the prices were:—St. John del Rey, 41½, 42, 42½, 41½, 42½; United Mexican, 6, 6½, 6; Fortuna, 1½; East del Rey, 1½, 1½; Linares, 6½, 7.

The closing quotations for shares in new undertakings to-day were:—East del Rey, ½, 1 prem.; Ocean Marine Insurance, 4, 4½ prem.; Thames and Mersey Marine, 1, 1½ prem.; Universal Marine Insurance, 1½, 1½ dis.; London and Provincial Marine, ½, 1 dis.; Commercial Union Fire, ½ dis. to par; Mercantile Fire, par to 1-16 prem.; Oriental and General Marine, ½, 1½ prem.; and Metropolitan and Provincial Bank, ½, 1½ prem.

At Redruth Ticketing, on Thursday, 2997 tons of ore were sold, realising 18,674l. 19s. The particulars of the sale were—Average standard, 133½ 6s.; average produce, 6½; average price per ton, 6l. 8s.; quantity of fine copper, 201 tons 18 cwt. The following are the particulars:—

Date	Tons	Standard	Produce	Price per ton.	Ore copper.
Sept. 12.....	3063	£180 1 0	6½	£5 3 0 ..	£90 0 0
" 19.....	6196	132 11 0	6½	5 6 0 ..	87 7 0
" 26.....	3874	130 2 0	6½	5 14 0 ..	88 0 0
Oct. 3.....	3704	134 10 0	6½	5 13 0 ..	90 3 0
" 12.....	2997	133 6 0	6½	5 8 0 ..	92 10 0

Compared with the sale of last week, the advance has been in the standard 14s., and in the price per ton of ore about 1s. 7d. Compared with the corresponding sale of last month, the advance has been in the standard 2l. 15s., and in the price per ton of ore about 3s. 8d.

At the Wicklow Copper Mine meeting, on Thursday (Mr. Edw. Wright in the chair), the accounts for the six months ending Sept. 1 showed a profit of 10,600l. The reports and accounts were unanimously adopted, and a dividend of 2s. per share, free of income tax, was declared. The mine is reported to be looking well. The dividend will be payable on and after Nov. 1. Large quantities of muriatic acid are on the wharf ready for sale.

At Herodsfoot Mine meeting, on October 1 (Mr. Matthew Loam in the chair), the accounts for the four months ending August showed a profit of 1735l. 2s., a cash balance of 1321l. 16s. 3d., and a balance of assets over liabilities of 2862l. 18s. 7d. A dividend of 1792l. (1l. 15s. per share) was declared, and 1070l. 18s. 7d. carried to credit of next account. Messrs. Loam, Glubb, Caunter, Davey, Hawker, and Medland, were appointed a committee of management. Capt. Thomas Trevillion reported that the mine is looking very well, and he sees no reason to doubt their returns for the future being kept up.

At the East Caradon Mine meeting, on Thursday, the accounts for the three months ending August showed—Balance last audit, 1726l. 15s. 2d.; ore sold, 6444l. 17s. 5d.=7988l. 14s. 7d.—Mine cost, merchants' bills, dinner at the last general meeting, and sundries, 1944l.: leaving credit balance, 6044l. 14s. 7d. A dividend of 8840l. (12s. 6d. per share) was declared, and 2204l. 14s. 7d. carried to the credit of next account. Lord's dues, 334l. 13s. 3d. remain unpaid, leaving 1570l. 1s. 4d. net in favour of the adventurers.

At the Marke Valley Mine meeting, on Thursday, the accounts for the three months ending August showed—Balance last audit, 1726l. 15s. 2d.; ore sold, 5390l. 8s. 3d.=7117l. 3s. 5d.—Mine cost, 2778l. 12s. 1d.; lord's dues, 2697l. 18s. 10d.; sundries, 121l. 13s. 3d.: leaving credit balance, 4055l. 19s. 2d. The profit on the three months' working was 2329l. 14s. 1d. A dividend of 2250l. (5s. per share) was declared, and 1805l. 19s. 2d. carried to credit of next account. The balance of assets over liabilities was 3121l. 16s. 8d.

At Wheal Ludcott meeting, on Monday (Mr. C. Trotter in the chair), the accounts for the four months ending August showed—Balance last audit, 1726l. 15s. 2d.; ore sold, 6444l. 17s. 5d.=7988l. 14s. 7d.—Mine cost, 2778l. 12s. 1d.; lord's dues, 2697l. 18s. 10d.; sundries, 121l. 13s. 3d.: leaving credit balance, 6044l. 14s. 7d. A dividend of 8840l. (12s. 6d. per share) was declared, and 2204l. 14s. 7d. carried to the credit of next account. Lord's dues, 334l. 13s. 3d. remain unpaid, leaving 1570l. 1s. 4d. net in favour of the adventurers.

At the Charlestown United Mine meeting, on Thursday, the accounts for the four months ending August showed—Balance last audit, 1726l. 15s. 2d.; ore sold, 6444l. 17s. 5d.=7988l. 14s. 7d.—Mine cost, 2778l. 12s. 1d.; lord's dues, 2697l. 18s. 10d.; sundries, 121l. 13s. 3d.: leaving credit balance, 6044l. 14s. 7d. A dividend of 8840l. (12s. 6d. per share) was declared, and 2204l. 14s. 7d. carried to the credit of next account. Lord's dues, 334l. 13s. 3d. remain unpaid, leaving 1570l. 1s. 4d. net in favour of the adventurers.

At the Conduffor Mine meeting, on Wednesday, the accounts for the four months ending August showed—Balance last audit, 1726l. 15s. 2d.; ore sold, 6444l. 17s. 5d.=7988l. 14s. 7d.—Mine cost, 2778l. 12s. 1d.; lord's dues, 2697l. 18s. 10d.; sundries, 121l. 13s. 3d.: leaving credit balance, 6044l. 14s. 7d. A dividend of 8840l. (12s. 6d. per share) was declared, and 2204l. 14s. 7d. carried to the credit of next account. Lord's dues, 334l. 13s. 3d. remain unpaid, leaving 1570l. 1s. 4d. net in favour of the adventurers.

At the Pendine Consols Mine meeting, on Oct. 3, the accounts showed—Balance last audit, 400l. 6s. 8d.; tin ore sold, Aug. 2435l. 6s. 3d.; Oct., 2007l. 17s. 7d.; carriage, 34l. 8s. 11d.; sundries, 5l. 6s.=4973l. 5s. 5d.—Mine cost, May to July, 3147l. 6s. 10d.=5097l. 8s. 2d.—Dividends paid July, 960l. 1s. 9d.; mine cost, 1821l. 10s. 10d.; sundries, 3147l. 9s. 1d.; leaving balance, 3240l. 6s. 9d. John Stannard stated there was still a large quantity of tin-stull at surface prepared for the stamps, which they would be in a position to stamp in a short time. There were 23 pitches at work, at tributes varying from 3s. to 12s. 6d. in 17'. The total number of hands employed, 372. There had been sold during the quarter 58 tons 17cwt.s. 3qrs. 13s. 16s. The agent estimates that, notwithstanding this large profit, the reserves in the mine have been increased by at least 20,000t. in the three months. The report of the agents is of a very satisfactory character.

At the Tregony Pendarves Mine meeting, on Oct. 3, the accounts for the four months ending July showed—Mine cost, 647l. 3s. 9d.; merchants' bills, 1046l. 5s. 6d.; Capt. R. Pryor, compensation for his expenses in obtaining salt, &c., 100l.; engine, boilers, &c., 1042l. 10s.=2353l. 19s. 2d.—Call, 1024l. 1s. 9d.; Aug. 1071. 4s. 3d.; sundries, 16s. 7d.=637l. 13s. 3d.—Call received 414l. 4s.; leaving debit balance, 2222l. 19s. 3d. The arrears of call amounted to 198l. 14s. A call of 1s. per share was made. The report of Capt. R. Pryor and J. Rule stated that from the character and prospects this speculation presented, it was their firm conviction that a determined and steady perseverance was only required to ensure to the proprietors at no very distant day a very valuable and lasting mine.

At the Tryphena Pendarves Mine meeting, on Oct. 3, the accounts for the four months ending July showed—Mine cost, 647l. 3s. 9d.; merchants' bills, 1046l. 5s. 6d.; Capt. R. Pryor, compensation for his expenses in obtaining salt, &c., 100l.; engine, boilers, &c., 1042l. 10s.=2353l. 19s. 2d.—Call, 1024l. 1s. 9d.; Aug. 1071. 4s. 3d.; sundries, 16s. 7d.=637l. 13s. 3d.—Call received 414l. 4s.; leaving debit balance, 2222l. 19s. 3d. The arrears of call amounted to 198l. 14s. A call of 1s. per share was made.

At the Condurrow Mine meeting, on Wednesday, the accounts for the four months ending August showed—Balance last audit, 2047l. 1s. 9d.; interest and commission, 12l. 5s. 7d.; mine cost, 690l. 16s.; sundries, 3147l. 9s. 9d.; leaving balance, 3240l. 6s. 9d. John Moyle stated that there was still a large quantity of tin-stull at surface prepared for the stamps, which they would be in a position to stamp in a short time. There were 2

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Notices to Correspondents.

* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filled on receipt: it then forms an accumulating useful work of reference.

EAST MINER LEAD AND COAL COMPANY.—Would some one of your readers who is acquainted with this company, situated somewhere near Wrexham, in North Wales, give any information with respect to its management, and the manner in which it is conducted? Being told that it is now under the Limited Liability Act, I have looked weekly to the Journal for some particulars as to what progress they are making. As I know the Journal is open to receive reports from such public companies, what reason can there be that no report from this has been sent for publication? Perhaps some of the shareholders can enlighten the public upon this company.—CONSTANT READER.

WHEEL ELLEN (SOUTH AUSTRALIA).—Can any of your readers inform me what is doing in this company, and when we are to be honoured with a general public meeting, and a statement of accounts? What are the auditors about? I should also like to know when the produce, of which we have so much, is to arrive? And lastly, though not least, where the company are at present located, for I find they have departed from their old quarters in Broad-street?—L. M.

NORTH WALES SLATE QUARRIES.—A letter had been forwarded to "Cynno."

THE PATENT METALLIC SAFETY-FUSE.—My attention has been directed to a paragraph in your report of the Annual Meeting of the Miners' Association, in which my name is linked to an expression of an opinion on the merits of the patent metallic safety-fuse. Allow me to correct this. As the honorary general secretary of the association, I read the communication placed in my hands, but I made no remark whatever upon it, for the best of all possible reasons, that I know nothing of the character of this fuse in any of its practical applications.—ROBERT HUNT: Oct. 9.

SILVER VEIN MINING COMPANY.—Still silent! The shareholders are not treated well by the directors and manager, whom they have supported, and are ready still to support, if common confidence be given to them. Everybody knew that the project of Mr. Squire was a speculation, and there is no disgrace attached to the failure of a speculation. I mean no moral disgrace. But a failure which, considered simply on its own merits, may be a misfortune, and nothing more, may be turned into a disgrace by the way in which it is received, and published, or concealed. Nobody attaches any stain to the honour of the noble lord and others, the directors, or to Mr. Squire, because results may not have answered their sanguine expectations; but these gentlemen can hardly be aware of the whispers that will shortly be gathering strength unless they speak out like men of honour. If they will persist in silence, many will think that they have some reason to be ashamed of speaking. Let them remember the old proverb—"Speak truth and shame the Devil." Has a decided failure taken place? Yes or No. Only let them say the word. Has a partial failure taken place? Let them say, Yes or No. Let them explain the past, the present, and their intentions for the future. And above all let them have a meeting of the adventurers.—A SHAREHOLDER.

SUPERHEATING STEAM.—"A. B." in the Journal of Sept. 28, makes some enquiries on the subject of superheating steam. No reply appeared in your last issue, so I beg to refer your correspondent to Mr. Wm. Butlin, of the Vulcan Engine-Works, Northampton for information. Mr. Butlin has patented an apparatus for superheating steam, by which means a saving of 30 per cent. is effected in the consumption of fuel, 25 per cent. less water required to feed boilers, a great increase of power is obtained, and the boiler is rendered more durable. The above patent can be applied to any boiler, either new or old, and to every description of stationary and portable engines.—WILLIAM BROWN: *Dartington Mines, Northampton*, Oct. 9.

PATENT LAW.—Mr. Campin's communication is unavoidably postponed till our next. THE CASARA MYSTERY.—Your last week's correspondent says he has waited in vain since Sept. 7 for an answer to his enquiries of that date, and I believe no reply has been given to the pointed questions of your other correspondent, of Sept. 14. I now ask the following plain questions, and I expect a distinct and authentic answer. If the official reports and statements published weekly during the month of May and June last were true, why is the company to be wound-up, and the valuable property to be sold at a mere nominal price? Do the directors expect the public to subscribe capital, on the faith of their prospectus, to purchase the Casara set, furnish the valuable plant, and at a cost of near 9000/-, prepare the mine to pay dividends, and then for some mysterious reason allow it to be sold at a mere nominal price of (say) 1000/-, when it is on the point of paying regular dividends? I also wish to know what competent person or persons have specially examined the mine previous to the resolution to wind-up the company, and where I can see their reports, if any? It was on the faith of the prospectus being true, the directors and solicitors respectable, the management business-like and legitimate, and the reports of Capt. M. Francis, Capt. Raiph, and Capt. Griffiths being correct, that I and many others became shareholders, and as these several points were satisfactorily established at the general meeting last January, and as I know for certain that the mine is producing good lead at present, I wish to know why the company is to be wound-up, and the shareholders to be sacrificed and lose all their money?—A SHAREHOLDER.

CASARA.—Permit me to suggest to your correspondent who writes for information through the Journal respecting this mine to adopt the course I have pursued—to apply to the secretary, Mr. Charles, whom I found only too anxious to give all information in his power and every facility for investigation, with which I was perfectly satisfied. I can readily understand the objections a secretary of a mining company might have to reply publicly to anonymous correspondents, nor do I think he should be expected to do so.—ANOTHER SHAREHOLDER.

BORING MACHINERY.—Your readers are indebted to your correspondent for the information respecting Mount Cenis Tunnel in last week's Journal; but I should like to ask him in what respect he considers the circumstances more unfavourable to the working of such a machine as that described in a tunnel than in one of our British mines? I think the circumstances more favourable in the tunnel than they would be in most mines.—M. E.: *Middlesbrough-on-Tees*.

THE MINING JOURNAL Railway and Commercial Gazette.

LONDON, OCTOBER 12, 1861.

FOREIGN MINING, AND THE NEW TARIFFS—IX.

There is little change in the St. Dizier market, but complaints are still made that the prices of irons do not bear a due ratio to the prices of pig (*fontes*), while the dryness of the past season having closed the canals for some little time, difficulties have been experienced in obtaining adequate supplies of coals. But the season has arrived when abundant rains will, no doubt, remove this obstacle. Prices of irons have, on the whole, risen during the last six months, but there seems to be an impression that the advance will not be sustained, and warnings are held out to producers not to reckon too much upon it when they lay in stocks. Some proprietors of rolling works have succeeded, however, in putting off pig at a rise after buying old scrap iron, and some new transactions of this kind were in progress at the latest available dates. The appearance of English pig for refining is noted for the first time in the St. Dizier market, and the French protectionists have seized upon the fact as triumphantly refuting the assertions of their free trade opponents, that even the reduced tariff now in operation would exclude foreign pig from the interior of France. Only about 10 tons of the English pig had been purchased by way of experiment. The Paris copper market has been animated, and numerous transactions have taken place. At Havre prices have been well sustained, and an upward tendency has appeared, while at Hamburg also good demand has been experienced. Prices of tin have been sustained at Paris, but the transactions noted have not been important. The lead market has been calm at Paris. Some improvement has appeared at Havre, but at Hamburg there has been a good deal of stagnation, and sales have been pressed. In zinc numerous transactions are reported at Paris, and good prices have been realised.

In giving recently statistical details of the total coal production last year of the Northern of France and Valenciennes basins, we promised to add the extraction of the Pas-de-Calais basin, the importance of which is increasing. Eleven companies who hold concessions comprising the greater part of the basin in 1859 raised 5,266,952 hectolitres, or, in round figures, 105,000 tons English, while last year the production approached 118,000 tons. Last year's return comprised the extraction, at present on quite a small scale, of four new concessions—Ostricourt, Carvin, Meurchin, and Annœulin—which cover a large space in the north of the basin, occupying altogether 96 hectares (240 acres English). The extraction effected last year would have been more considerable but for the transport difficulties experienced in workings not united to the Northern France Railway. Several pits could readily double their daily extraction if they could find a more ready outlet for their products. In the course of 1859 and 1860 several new veins of coal were discovered, some of them having a thickness superior to the beds being worked in the northern basin. The prices of the coal raised have been affected by the unequal condition in which some companies are temporarily placed pending the construction of branch colliery lines; perhaps also the various qualities of the coals have had something to do with the irregularity in quotations, for the coals obtained appear to be calculated to meet the most varied requirements of industry, and are consequently more or less sought after. The tendency of the market is towards a fall; quotations at the latest dates ranged from 11d. to 1s. 1d. per 198 lbs., but some transactions had been effected even below those terms. The number of pits already opened in the Pas-de-Calais basin, exclusive of the detached basin of Hardingham, amounted at the close of 1860 to 29, of which 25 were in concessions already granted, and four in land bordering on the basin, and which formed the subject of new negotiations. Beyond these limits no important discovery was made last year, notwithstanding the numerous explorations constantly pursued. It may be interesting to append, also, details brought down to the latest possible date of the production of the iron works of the Haute-Marne district, an important centre of siderurgical operations. In 1840 there were 65 blast-furnaces in activity in the department; this number has at present increased to 87, after having attained a total of 91 in 1857. The fabrication of iron has been changed of late in the Haute-Marne by the introduction of rolling works and the substitution of coal for wood in the refining process. Of 22 forges which in 1840 were worked with charcoal, only one is at present in activity. As regards again, 43 forges which in 1840 were worked with hammers, the number is reduced to 16, while rolling works have gradually increased from 2 in 1840 to 12 in 1860. In 1840, 45 ironworks produced 23,082 tons of metal, of which 19,160 tons were hammered iron, and 3,922 tons rolled iron; while in 1860 the production was 40,996 tons of rolled iron, and 5,591 tons of hammered iron. These changes may be further illustrated by a short tabular statement:

Year.	Pig, rough or cast,	Proportion per cent. of—
	first fusion.	Irons of all kinds.
1840	Tons 53,897	Tons 23,082
1850	50,427	26,822
1855	86,740	38,374
1856	92,502	35,423
1857	88,476	38,176
1858	88,417	35,365
1859	90,068	40,676
1860	89,907	46,587
1861 (first half)	42,637	23,826

In these statistics it should be observed that metrical quintals have been changed into tons, at the rate of 2 cwt. per quintal; for, although the quintal slightly exceeds that weight, it is usually so reckoned in Anglo-French affairs. As regards pig, the increase has wholly occurred in cast, which has advanced from an annual production of 29,000 tons in 1840 to from 75,000 to 80,000 tons per annum at present. The Prefect of the Haute-Vienne gives a doleful report of the state of siderurgical affairs in that department, attributing the depression to the high price of combustible (both coal and wood), the expenses attending the transport of raw material, and the reduced price at which Scotch pig can be introduced since the reduction of tariffs. Eight blast-furnaces in the department have been blown out, and of 40 refining works only 8 or 10 are in activity, while even they are for the most part working with old scrap-iron, and are making, almost exclusively, hard iron for agricultural purposes.

A writer setting forth the news of the committee of French coalowners, deputed to watch over the interests of the trade, loudly insists on the necessity of improving the rivers and canals of France, arguing that her transport arrangements place her in a position of great inferiority, as compared with England. Thus, according to M. Rouher, the price of a ton of coal in 1859 in the centres of consumption in France was on an average 21s. per ton, while the price at the pit's mouth averaged nearly 10s. 6d. per ton. This was double the rate current in England at the same time at the pit's mouth, and three or four times the amount of the price charged at the places of consumption. The writer (M. Burat, secretary of the committee) argues that to enable French industrial establishments to compete on equal terms with those of England, a radical and complete reform must be effected in the system of transport in force. As to the distance which products have to traverse from points of the interior to the French coasts—while the numerous ports of England are all readily accessible—the French, he perceives admits, will have to submit to the conditions which Nature has imposed on them; but as to the expense of transport, there is much to be done, and the hopes of coalowners, iron-workers, and manufacturers are concentrated on this point, since to enable them to compete with England, they consider it necessary that raw materials and manufactured goods should be transported, not, perhaps, at English tariffs, but at rates sufficiently low to compensate for the excess of distance. The French Government has decided on the prompt construction of 22 new lines of railway, extending over a length of 82½ miles, and estimated to cost 14,800,000£, the necessary capital being proposed to be raised by an emission of "obligations," repayable in 30 years; but, although these new lines will extend the benefit of railway communication to districts which have not at present shared in it, M. Burat contends that what is most required to promote the interests of French industrial production is the amelioration of interior navigations. A decree has recently reduced the navigation

dues chargeable on canals belonging to the French Government, but it appears doubtful to M. Burat whether the concessions made are sufficient to satisfy the interests engaged in an industrial struggle with England and Belgium. The rate of charge to be levied varies according to the circumstances of each canal, some being closed longer than others, while the hauling charges also differ. Thus on the canals of the North of France, which admit boats of 200 to 300 tons, the dues have been fixed at 8d. per ton per mile, while on the canals of the Centre and East, which will only admit boats of 60 to 125 tons, the rate charged is to be only 4d. per ton per mile. The same principle M. Burat contends ought to be applied to fluvial navigations; but, by a singular anomaly, the lower parts of the rivers most easily navigable—such as the Seine, from Rouen to Havre—are free from dues, while they are levied on the upper part of the streams, which can be less readily traversed. Another grievance of which M. Burat complains is that coals from the principal English workings, those of Newcastle and Scotland, are not only permitted to enter French ports at little cost, but even ascend the Seine, the Loire, or the Gironde, without paying any dues. Important works projected for improving interior navigations have remained suspended, while heavy sums have been devoted to the amelioration of the embouchures and lower parts of the rivers upon which no navigation dues are paid, and thus English coals every year make progress at the expense of the proprietors of the interior basins of France. "The English boats," indignantly exclaims M. Burat, "thanks to the protection which is accorded to them, augment year by year their tonnage, and penetrate further into the country. Secounded by capital more abundant and more accessible to industry than in France, the English coal companies organise lines of screw-steamer, several of which carry 600 to 900 tons of coal each, and ascend the Seine as far as Rouen. What can our workings of the Loire, the Saône-et-Loire, the Allier, &c., do to oppose this invasion? They embark their coals in boats of 100 to 125 tons, which have to traverse imperfect canals chargeable with dues, and their expeditions are subject to interruptions of the seasons, which absorb a quarter of the year. Their competitors can avail themselves of the powerful aid of steam, while sinuous and narrow canals only permit them to employ hauling by men or horses." Like most Frenchmen, when they have once grappled with a subject, M. Burat has a good deal more to say, but we cannot afford him any more space this week. Meanwhile it may be observed that his observations afford another illustration of the comparative helplessness of a nation unduly dependent on State aid, and unduly hampered with State restrictions, when brought face to face with a people relying on their own enterprise. The commercial treaty which Napoleon III. has inaugurated—although the statistics given of late under this head seem fully to justify it—promises to bring out for solution a long series of grievances, and if it does nothing else, it will read the French some useful lessons in political economy.

M. Lisbet, engineer of the company of Bully-Grenay, in the Pas-de-Calais district, and an old pupil of the Mons School of Mines, has just produced a perforator of small size, moved by hand. The advantages claimed for the apparatus are its very small weight, the narrow space which it occupies, the promptitude and facility with which it pierces very hard rocks, and the moderate force required to be exerted to put it in activity. It appears that in June last a commission of engineers experimented with this apparatus in the mines of Vendin-lez-Béthune. A hole was bored by the perforator in coal schist to a depth of 23½ inches in three minutes; a second hole attained in the same schist a depth of 37½ inches in six minutes, the tool having encountered at a depth of 23 in. a mass of carbonate of iron nearly 2½ in. in thickness. Two other borings were pierced in coal grit—the first 25½ in. deep in 15 minutes, the second 20½ in. deep in 5½ minutes. A fifth boring made in a difficult schist was carried to 7½ in. in 5 minutes. More recently further experiments have been

and also producing a pecuniary damage of not less than 100,000/- to the coalowners, the largest proportion of which destruction of life and property was totally unnecessary, and the result of inadequate management.

I know that exculpatory verdicts have in general been obtained, and in this at least those interested prove their ability. Colliery viewers, I know, evidence their abilities in the production of large quantities of coal in a given time, and that at a minimum cost, and in many other respects, but in the concocting of specious pleas to account for explosions, and in producing evidence in support of such pleas, their ability far surpasses that displayed in any other department. There has not been an explosion of a serious nature during the present century but what has been triumphantly proved at the inquests held thereon to have been purely and simply accidental, if we except the awful catastrophe of Lund Hill. But, notwithstanding the unanimity of colliery officials in representing this view of the case, is it possible that the discerning public are satisfied with it? Is it not evident that the desire to prevent future legal satisfaction being given to the sorrowing relatives of the sufferers is the cause of all this unseemly entire concurrence of opinion? Is it not the prevailing sentiment at the time that the colliery must be got over the inquest as quietly as possible? Do not both coroners and juries frequently endorse and act upon this opinion? And why should this be so? Who is so properly responsible as the owners of such collieries? Who has the responsibility of the appointing of suitable officials? Certainly and properly the owners, and as certainly and properly are they the proper persons to be held amenable for the management of those they appoint. I have recently read a list of compensations made in Scotland to the friends of the sufferers in a case of colliery explosion. What is right in Scotland ought to be equally right in England and Wales. True, the owners would be in some cases absolutely and utterly ruined. Have not hundreds of colliers' families been so? And if this is traceable to their not having had due regard to the fitness of the persons they have appointed to occupy such important situations, either from mistaken and miserable economy in the amount of remuneration given, or from other interested motives, who so fittingly and properly ought to be made participants in the dire effects?

The inspection of coal mines costs the general public of this country a large sum of money annually. If the owners were legally enforced to make compensation in all cases of fatal accident arising from the improper conducting of their works, the office of Inspector would soon become a sinecure, and might be abolished, and thus save the country some 10,000/- a-year, a sum that would afford in itself considerable relief to the survivors, it being equal to nearly 10/- in every case of fatal accident.

What I should recommend is that the Government should tax all coal raised, so as to provide a sufficient fund to enable them to make compensation to the survivors in every case of fatal colliery accident; and, further, that the owners of every colliery should be made to contribute in addition a fixed sum (say, 50/- or 100/-) on every such fatal accident occurring in their collieries, so as to be an inducement to their guarding against such fatalities to the utmost.

IMPROVEMENTS IN MINE MACHINERY.

With an improving standard for copper, and excellent prices for tin, lead, and other ores, mining adventurers are undoubtedly justified in regarding their prospects as highly encouraging, and it would, therefore, be well for them to consider whether it would not be permanently advantageous to them to avail of the present opportunity for introducing such labour-saving machinery as has been proved to be worthy of adoption, from the satisfactory results which have been obtained from the use of similar machinery elsewhere. Although there are many untried inventions which promise to become of practical utility to the mining interest, it must be admitted that there are many mines which are not in a position to risk even a possible failure; but where a mechanical contrivance has been ascertained, from actual use upon a mine, to facilitate the rendering of the ore marketable, and to lessen the cost of effecting that desirable object, it may fairly be assumed that the result of introducing it into mines generally, whether dividend-paying or progressive, could only be to increase the returns—amongst the dividends in the one case, and reducing calls in the other.

On Tuesday a number of gentlemen connected with the practical working of metallic mines met to witness the operation of Mr. John Hunt's Ore Separator, patented some nine years since, and which has for some time past been in successful working on a large scale at Porthleven. The machine, which is in fact a jiggling-machine, received the unequivocal approbation of all present, including several successful mine managers and practical miners. We may also mention that Capts. Nicholas Vivian and Charles Thomas (of Dolcoath), referring to the invention, write—"Hunt's patent jiggling-machine we consider the best that has been introduced, the separation effected by it appears perfect, and we strongly recommend it to all parties wishing to dress ores in a cleanly, economical manner. The machine is very simple, and may be made and fixed at a trifling cost." The machine thus favourably reported upon consists of a rectangular box, or hutch, divided into two compartments by a horizontal perforated diaphragm, which may consist of a perforated copper plate, or of a sieve. The crushed stuff to be operated upon is regularly fed through a hopper at one end of the sieve, and the lighter of the refuse passes off at the other. At the back of this rectangular box is a large square force-pump, the piston of which is worked by suitable lever gearing; and the water being supplied below the piston through a suitable valve, and forced into the chamber beneath the sieve, the movement of the piston causes the water to be forced through the sieve by sudden jerks, the current always being upwards, the separation being thereby effected in a very perfect manner, and ore containing only 5 per cent. is cleaned at one operation, by keeping on the sieve thick bottom of ore. Not only is the ore separated from the refuse, but the ores themselves are likewise arranged according to their specific gravity; for example, in the experiment on Tuesday lead and blende were contained, and the separation was, practically speaking, complete—upon the refuse being removed clean lead was found at the end of the sieve nearest the hopper, and clean blende at the opposite end.

From this description it might appear that there would be a waste of water, which would render the machine quite inapplicable to many mines, but such is not the fact; we are assured that the machine can be worked with quite as little water as the ordinary hutch, and that, in fact, at Porthleven, where, as we have already stated, the machine is in successful operation, water is particularly scarce, and every economy of it is necessary. We have an illustration of the machine in preparation, and in an early Journal shall refer more fully to the subject.

OUR INDIAN EMPIRE, AND THE COAL TRADE.—The latest advices from India bring the gratifying intelligence that a worthy imitator of our esteemed correspondent, Mr. Robert Hunt, has appeared in our Eastern empire, in the person of Mr. Oldham, the director of the Geological Survey of India, so that henceforth we may hope that Indian mineral statistics will be as available to the English capitalist as are those of Great Britain at the present time. Mr. Oldham has made a beginning by the publication of the statistics of coal, and it is intended, we understand, to collect similar information with respect to copper, iron, slate, gold dust and precious stones, lime, and building stones. As in all first attempts, accuracy could scarcely be hoped for, but the figures are sufficiently near to truth to enable an estimate to be formed of the increasing development of the coal fields of India, and of the capability of the country to supply ample coal for the general industrial purposes of the country. Mr. Oldham's statistics extend from the beginning of the fourth quarter of 1857 to the same period of 1860, during which short time the annual production has risen from 6,000,000 to 10,000,000 maunds, or, to use English weights, from 226,140 to 370,206 tons, the increase being thus equal to fully 64 per cent. Comparing the production of coal for 1857, it appears that the output was—in the British Islands, 66,000,000 tons; in Belgium, 5,700,000 tons; in France, 4,500,000 tons; in the United States, 4,500,000 tons; in Prussia, 3,500,000 tons; in British North America, 900,000 tons; in British India, 370,206 tons; in Bohemia, 300,000 tons; and in Spain, 250,000 tons. From these figures it appears that India at present raises only about one-third more than Spain, and one-tenth as much as Prussia, though even at the present time more than 700,000 tons. Referring to the subject, the *Friend of India* says:—"Reckoning the price of Indian coal in Calcutta at 5 annas a maund, or 17s. a ton, and English coal at the same rate (though it is far higher), we have more than 500,000/- sterling spent on coal every year in India. As the trade and manufactures of India increase, and as machinery comes to be more and more largely introduced, indigenous coal will become more important. The fact that the supply is in certain districts inexhaustible, and that the demand is annually increasing, is one full of hope for the coal companies and proprietors who already occupy or, like the Bengal Coal Company, monopolise the field. It is possible the Nerbudda fields,

worked by the company just established, may supply Bombay and the southern portions of the North-Western Provinces on the completion of the railway. But Oude, the Punjab, and Madras must still look to their forests, which, on both sanitary and commercial grounds, it becomes daily of more importance to utilise and renew."

BRISTOL TRADE AND MINING SCHOOL.—Evening science classes have been commenced at this institution with every promise of success. The course of instruction includes mineralogy, mining, chemistry, experimental physics, machine drawing, geology, arithmetic, and algebra. The fees are very low, being at the rate of 3s. per quarter for each subject, or 5s. the session of two quarters, and the pupils will undergo an examination by the Department of Science and Art for the Queen's prizes and for the medals offered by the department. These classes offer unusual facilities to those engaged in mining. The preceptor in the mineralogy and mining classes is Mr. C. S. Wood, Associate of the Government School of Mines, and the subjects taught embrace the principles of crystallography, chemical and physical properties of minerals, uses of the blow-pipe and minerals, repositories of useful minerals, with the principal mining operations, &c.

THE COAL TRADE AT BRISTOL.—During the month of September the exports of coal from Bristol to foreign parts amounted to 1943 tons:—To Bremen, 35 tons; Demerara, 386 tons; St. John's (Newfoundland), 100 tons; Melborne, 250 tons (and 40 tons of coke); Santander, 268 tons; and Rangoon, 904 tons. Compared with the month of August these returns show an increase of 938 tons in the overseas exports from this port, but taking the three months ending in September (when the exports were 3717 tons) as against the quarter ending in June (during which the exports were 5693 tons) there is a falling off to the extent of 1976 tons. The following are the places to which the exports of coal have been made in the quarter ending in September:—Matangas, 147 tons; Cuba, 69 tons; Demerara, 526 tons; St. John's (Newfoundland), 293 tons; Tobago, 70 tons; Dantzie, 150 tons; San Sebastian, 120 tons; Barcelona, 315 tons; Harbor Grace, 165 tons; Guernsey and Jersey, 5 tons; Malta and Constantinople, 400 tons; Bremen, 35 tons; Melbourne, 250 tons; Santander, 268 tons; Rangoon, 904 tons.

THE COAL TRADE OF NEWCASTLE.—From the commencement of the present year trade in Newcastle-on-Tyne and the neighbourhood has been exceedingly dull, and at the date of writing there is very little sign of improvement. Some interesting statistics have been published, comparing the export trades of the first eight months of the present year with those of the corresponding period of last year. Coal is almost the only article which shows any improvement, and the increase in the exportation of that article from January up to the end of August is about 370,000 tons. France, as usual, stands at the head of the list of customers, the quantity sent thither having increased from 902,524 to 1,004,150 tons; to Russia, Denmark, the Hanse Towns, Spain, and the United States, there has also been an increase, whilst to Prussia, Holland, and Turkey there has been a slight falling off.

THE COAL TRADE OF SUNDERLAND.—The returns for the month of September of the coal exportation of the Wear show a small increase over those of the corresponding period of last year, but a large falling off from those of the month of August last, attributable chiefly to the prevalence of adverse winds. The following are the figures:—During last month 164 British vessels carried 60,733 tons of coal and 113 foreign ships 30,604 tons of coal to foreign destinations. In September, 1860, 177 British vessels conveyed 58,130 tons and 101 foreign ships 27,434 tons of coal to distant ports from the same river; the total being in September, 1861, 277 cargoes comprising 91,137 tons of coal, and in September, 1860, 278 cargoes containing 85,564 tons of the mineral—an increase of 5573 tons.

COAL MINING has played sad havoc with some of the fairest spots in this country, and in no quarter has the truth of this assertion been more forcibly demonstrated than in the pleasant vale of Tunstall, about three miles to the south-west of Sunderland. But what is sentiment as compared with what the Scotch call "siller!"—and who cares for the song of the lark, the hum of the bee, the fragrance of the wild flower, or the leafy glories of the woods, when Commerce has her unnumbered fires to feed, and Civilisation is ever seeking for the means to achieve fresh conquests? Less than half-a-dozen years ago the eastern extremity of Tunstall Hope was about as pleasant a solitude as the eye could desire to look upon in the immediate neighbourhood of a large town; to-day, near a thousand human beings are tolling beneath its surface, and about a thousand more are gathered around the firesides that go to make up the pit village to which "Ryhope Colliery" has given a name and a local habitation. With all our regret for the Tunstall of yore, this is undeniably a "clearance" of the right sort, for, to give the poet his own way, "Ill fares the land, to numerous ill a prey," Where sheep accumulate, and men decay."

That policy has been reversed at Tunstall Hope; the sheep—if ever there were any—have gone where all good mutton goes, and the men at bank, if less picturesque objects in the landscape, are decidedly preferable in more ways than one, not the least of the advantages being the very large amounts of money which they spend on the evening of a pay Saturday in the shops of Sunderland. The coal royalty, which had for many years been in the possession of the Haswell Coal Company, extended over a space of 3000 acres, of which the workings of what is now Ryhope Colliery were about the centre. To the north it extended almost to Tunstall Hill, and came as near to the town of Sunderland as the Cedars, where it was divided from the royalty of Monkwearmouth Colliery by a barrier 44 yards wide; eastward it was unlimited. In the early part of the year 1856, the Ryhope Coal Company commenced to sink a shaft, which was known as "Ryhope New Winning." The work was carried on under the direction of Mr. John Taylor, and proceeded for some time with unvarying success. When, however, the shaft—which was 15½ ft. in diameter—had been sunk to a depth of 35 fms., the work was greatly impeded by water, but by means of a double 200-horse power engine placed at the surface, upwards of 3,000,000 gallons of water were daily pumped out, and this difficulty was overcome. Another shaft was then commenced, at a distance of 160 ft. from the first. It was of the same diameter as the other, and was sunk to the same depth, but as it was not required no further advance was made with it at that time. When the water had been drawn out of the first shaft a more formidable obstacle presented itself in the dampness of the sand through which it was necessary to sink. By a process then quite new in the practice of shaft sinking, Mr. Taylor succeeded in overcoming this difficulty in a very simple and effectual manner. As fast as the sand was brought out, the sides of the shaft were lined with iron tubing, by which the sand was prevented from filling in the part that had been excavated. The sand, which was 16 fms. in depth, was thus passed through in the extraordinarily short space of seven weeks. From this time the work proceeded smoothly and rapidly. Several seams of coal of inferior character were passed through, until, at a depth of 254 fms., the Maudlin seam, which is the one now being worked, was reached; it is 7 ft. 2 in. in thickness, and is admirably suited for household purposes. At a distance of 20 ft. below the Maudlin seam lies the Hutton seam, but this at present remains untouched. The first coal from the Maudlin seam was brought up in Dec., 1859, but it was not until April, 1860, that the shaft was regularly worked, and the coal brought out for shipment. About 100 men were then employed on the colliery, most of whom lived in temporary wooden houses, erected on the ground adjoining. Since that time the business of the colliery has steadily increased, and provision has gradually been made for the comfort of the men, until the place has assumed the dimensions of a large village. The number of men and boys now employed on the colliery is about 800, and the quantity of coal daily raised is 68 keels, or about 1400 tons. The raising of the coal has, until lately, been effected by one engine of 200-horse power, but another of the same power has just been added. Upwards of 100 horses and ponies are also employed in the pit, besides those above ground, but the principal part of the work at bank is performed by a locomotive engine. The coals are lifted in cages containing two tubs each, and 2 tons 8 cwt.s. are brought up at each draw. They are shipped at the Sunderland Dock, to which they are conveyed by a branch line of the North-Eastern Railway, and they are also extensively sold throughout the borough of Sunderland. Preparations are being made by the company for sinking the second shaft, and it is expected that by the middle of next year the work will be proceeded with. A double engine, of 400-horse power, with two 43-in. cylinders, is being built for the purpose of pumping out the water and going through the sand. When completed, this engine will be one of the largest in the coal trade. The company have erected 330 houses for the workmen, and it is intended shortly to increase the number. Each house is provided with a pigsty and every convenience, and a plot of ground to be laid out as a garden. In the course of their operations the company were fortunate enough to meet with a quarry of limestone at a short distance from the colliery, and with the stone obtained from it the whole of the buildings, including the engine-houses and workmen's cottages, were erected, the great expense which would have been incurred by obtaining these materials from another place being thus entirely saved. Gasworks have also been built, and the whole of the premises at bank are lighted by this means. The spiritual and educational requirements of the village have not been lost sight of, and a school-house of a very handsome and commodious description has been erected by the company in the centre of the population for the children of the men employed in the colliery, and at present about 100 boys and as many girls receive instruction from a competent master and mistress. The building is well ventilated, and consists of two large rooms, with class rooms and every convenience; it is surrounded by a spacious playground. On Sunday afternoons service is conducted in one of the rooms by the Rev. Mr. Wilson, rector of Ryhope, and the other large room is used for a similar purpose by the dissenters. Nor are the means for securing the cleanliness, which is said to be next to godliness, forgotten—a well being now in course of sinking, from which it is intended to introduce water to the houses of the workpeople, and also to the engine-boilers, which are at present supplied by water obtained from the partially-dried shaft. The colliery is only yet in its infancy, but already its success has been such as to have led to the lot of other winning in the coal field of Northern England; and it is to be hoped that in all their future operations the company may be able to congratulate themselves on the continuance of that good fortune which promises to ensure them an ample return for the capital which they so splendidly invested in a great and hazardous undertaking.

RAILWAY COMPANIES AS COAL DEALERS.—The speech of Mr. Richard Hodgson, M.P., at the North British Railway Company half-yearly meeting, as reported in the Journal last week, has provoked considerable controversy in the local papers. A correspondent of the *Scotsman* asserts that "the company have a coal establishment at their head office in Edinburgh, managed by a 'coal clerk,' who issues orders for the coals required, and grants orders for payment of them monthly. The stationmasters—a very respectable, hard-worked, and ill-paid class of men—glad to supplement their limited incomes in an honest manner, sell all the coals they can, on which they are allowed 1d. per ton; but who pockets the spoil arising from the runnage of the coal trucks is kept quiet. This runnage, or overweight, is very considerable; and it is alleged that the North British Railway Coal

Company favour those coalmasters who give the largest amount of overweight. Can this be true? It is pure fallacy to pretend that the North British Railway Coal Company benefit the public by their attempt to monopolise the coal trade by getting 'ample supplies of choice coal along the line.' The interests of the public may be safely left in the hands of industrious coal agents, whose bread depends on obtaining the best coals, and selling them at the cheapest rates. The keen competition in the regular coal trade is notorious." In reply to this communication, another correspondent writes to the same paper—"I am confident that the arrangement of the North British directors has been of great advantage to the public, bringing down, as it has done, exorbitant prices, and keeping in check the exclusive monopoly of coal agents in the North British district. That the North British Railway Company have found a considerable increase in the traffic owing to their coal-selling arrangements, there can be little doubt, from the many years they have been in operation; and I trust they may be continued for the good of the community."

NEW COAL FIELD AT NEWTON, SCOTLAND.—At a meeting of Newton freemen, held sometime ago, it was unanimously resolved to bore for coals on the Newton land, and that the search should be proceeded with immediately, on the freedoms reported to the meeting as the most likely to contain fuel. A few days ago the borers were rewarded for their pains by discovering a most extensive and rich seam of coal in a field near the Falkland junction of the Glasgow and South-Western Railway, about 30 fms. below the surface. It is expected that operations for sinking the shaft of a new pit will be commenced in a few weeks.

In the SOUTH DURHAM DISTRICT, on the 1st inst., there were 76 blast-furnaces, of which 48 were in and 28 out of blast. The largest number of blown-out furnaces was at Consett, where out of a total of 18 only 5 were in operation. The *Sunderland Herald* denies the truth of a report which was extensively circulated last week, that the North-Eastern Railway Company were about to purchase and resume the Bishopwearmouth Ironworks.

MINING CONGRESS OF VIENNA.

After an interval of nearly three years since their first meeting, the Miners' and Smelters' Association opened their proceedings on Sept. 23, in the great hall of the splendid Razoumowsky Palace, an edifice devoted by the Austrian Government to the purposes of the Geological Institute. It was a subject of regret to the committee that, although the Association was intended to embrace all countries, few foreigners had taken advantage of the invitation. Prussia, Russia, and Saxony had each a representative; no less than four attended from the Hartz, but these, with one from England, formed the whole of the foreign contingent, the remainder of the 180 persons who entered their names as taking part in the Congress being from various parts of the Austrian states. The first meeting was of an introductory character; Count Breda occupied the chair, and the Ministers for Commerce and Finance, Count Wichenburg and M. von Plener, were present, and made congratulatory speeches on the good spirit which had called together so numerous an assemblage. Among the members, besides a large proportion of gentlemen in the Imperial and Royal service, many of whom had come from distant places in Hungary, Bohemia, &c., were a number of owners or lords of mining property, several of the chief mining adventurers of the monarchy, and a number of mining and metallurgical agents from private works. Among these various classes only one spirit appeared to prevail—that of rendering the meeting practically useful, and treating it with thorough good fellowship; and the merry, friendly, adjournment, after the evening meetings, to the great Beer-palace in the Landstrasse, was well suited to promote the desirable unanimity of "one and all," which, in spite of the politicians, still animates the men of mines and minerals. Throughout the whole week morning and evening meetings were held in the apartments of the Geological Institute, and a number of valuable papers were read, of some of which we hope to present our readers with a further account. A small exhibition of the products of certain metallurgical processes, plans, models, &c., occupied two of the rooms. The chief papers read to the meeting were the following:—Mr. Schott, "On the Mining and Geological Features of the Cracan District"; Mr. Rittinger, "On Separation of Ores in Dressing by Griddles and Sieves"; "On a New Continuous-Action Jigging Machine." Mr. Schell, from the Hartz, "On a New Form of Percussion-frame." Mr. Schell, from the Hartz, "On the Bessemer Processes." M. Reissacher, "On the Driving of a Large Level to a Hot Spring at Gastein, in the Salzburg Alps." Prof. Pöschl, "On Various Modes of Preserving Mine Timber from Decay." Baron von Ebner, "On Blasting by Electricity, and on the Advantages of Gun-cotton for similar purposes." Messrs. Ferentsil and Patera, "On the Extraction Processes for Silver, as carried out respectively in Eastern Hungary, and at Joachimsthal in Bohemia."

MINING IN RUSSIA.—A controversy is being carried on between two of the scientific periodicals of St. Petersburg, the *Journal des Mines* and the *Gazette de l'Academie*, as to the manner in which the mines of Russia are worked. The *Gazette* strongly condemns the system by which the Government takes the direction of most of the mining works in the country; it contends that the official system only insures a loss, and insists on the necessity of transferring this branch of industry to private enterprise, or to the management of joint-stock companies.

Several works of importance are in progress or are about to be commenced at the principal rivers and harbours along the coast by the engineer for harbours. The public wharf at Newcastle is already nearly 900 feet in length, and is being extended at either end; to the east there is a length of 200 ft. yet to finish. The sum of 5000/- was voted last session for the further extension of the wharf; the work has been tendered for, and the tenders are now under consideration. A steam-crane, cast for the purpose at Messrs. Napier's foundry, is being fixed upon the new wharf, for the convenience of the coal companies loading vessels at the wharf. The sum of 5000/- voted for the construction of a breakwater upon the northern bank being now available that work will be immediately proceeded with. It is intended to construct on the north bank inside the harbour a small timber wharf, and to connect it by a railway, about a quarter of a mile in length, with the spot from which the breakwater is to be carried. Vessels arriving at Newcastle with ballast will deposit it at the wharf, upon which it will be carried along the railway, and form the breakwater. It is estimated that the vessels coming to Newcastle for coal deposit about 5000 tons of ballast in a year. No precise length is, we believe, fixed for the breakwater, but the work will be carried on by an annual vote, and will probably extend over number of years. The benefit, however, of the breakwater in checking the constant drift of sand from the northern bank filling up the harbour will in a short time be realised.

THE TARANAKI IRON-SAND.—Mr. S. Highley, F.G.S., in a paper read before the Geologists' Association, said—Taranaki iron-sand abounds along a certain part of the coast of New Zealand, a view of which, taken from the Government Report on the late war in that island, is placed upon the table. Sometimes the sand is washed out by heavy

certain that there is a very satisfactory prospect before those embarking their capital in the Zamora Tin Mining Company.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

OCT. 10.—The Quarterly Meetings of Ironmasters, their customers, and the various agents connected with the trade, were held in Wolverhampton on Wednesday, and in Birmingham to-day. On the whole, there was a fair attendance of the merchants from Liverpool, London, and parties connected with the trade in other districts of the country. The general result of the meetings is that the trade is rather better than at the beginning of last quarter, but as compared with a month or three weeks back, when an improvement was felt, and generally announced, no further movement can be reported. For the East Indies, the Continent, and the home market there is about, or nearly, an average demand; but as scarcely anything is doing for America, which is the best foreign customer in ordinary times, the trade is necessarily dull. There was an expectation a week ago that a decided improvement would be felt at the quarterly meetings, which has not been realised. This anticipation was based upon an impression, derived from advices from the North American States, that a change of policy, likely to result in a termination of the war, was probable, but subsequent news has not confirmed this expectation, consequently merchants have not purchased in anticipation of a peaceful solution of the present contest. All the accounts received from the States describe the stocks of iron as having gone down to an extremely low point, and concur in anticipating a speedy demand for iron, which must lead to importations from this country. Such transactions can at present only take place, it is thought, on a cash basis, which will necessarily impede and restrict them, but it is anticipated that absolute necessity will lead to increased purchases here shortly, although it is by no means anticipated that they will reach an average amount until peace ensues. The transactions in pig-iron at these meetings have not been extensive, as many makers had previously sold in advance, some for the whole, or nearly the whole, of the ensuing quarter. Prices are now 2s. 6d. per ton higher than they were three months ago, but this scarcely applies to pigs of the best makes, which never fell so low as others, the makers being able to command a better price, and to hold if buyers were not at once found.

The Coal Trade, as previously mentioned, is improving with the approach of winter. The dispute with the miners in part of the thick coal district continues, but is very limited in extent. The Quarter Days of the Hardware Merchants and Factors occur this week, and the accounts paid are considerably smaller than the average; in fact, the business done during this last quarter in these branches of trade has been less, probably, than for some years past. The improvement experienced a month since has not been maintained, and it is evident that it was to a considerable extent due to expectations based upon the comparatively satisfactory results of the harvest. Houses depending chiefly on North America are, of course, doing very little; and the home demand suffers from the depressing influence of the American war on the general trade of the country.

A project for the establishment of a Joint-Stock Bank in Birmingham, on the principle of Limited Liability, is now being discussed; and it is said that it has been received with so much favour as to give grounds for anticipating a successful result. The London and Westminster Bank is to be the model on which the constitution of the proposed institution is to be formed, and the shares are to be 100/-, of which it is only intended to call up one-fourth; so that whilst creditors would not have the security of the unlimited liability of the shareholders, they would have a capital to fall back upon equal to four times that actually paid up.

The letter of Mr. Brough on the subject of his remarks at the meeting of the South Wales Institute of Mining Engineers, in last week's Journal, simply coincides with what your correspondent felt must be the fact, and the mistake of the reporter is not difficult to understand; he having once acquired an erroneous impression, would apply it to subsequent remarks, of the general meaning of which he was giving only a condensed account.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

OCT. 10.—A gradual improvement is taking place in the Iron Trade, and were it not for the suspension of operations with America we should be in a position to report a very active business. The ironmasters' quarterly meetings have opened very dull at Wolverhampton. At Birmingham, to-day, there was a better attendance, and more business transacted. There is an improved demand for pig-iron, and rates are 2s. 6d. higher for the best makes. The movement for a reduction of the wages of the men employed in the iron trade is becoming more general. Messrs. G. and E. Dawes, of the Elsecar and Minton Iron-works, have proposed to their workmen a reduction of five per cent. The men have refused to accept the reduction, and when the time arrives for enforcing it we anticipate a strike. A difference exists amongst the men at the Witton Park Iron-works, the property of Messrs. Bolckow and Vaughan. The puddlers have been on strike, and on their agreeing to go to work again the batters and hatters took objection to the construction of some of the furnaces, some of which have been recently altered, and they refuse to go to work again unless the proprietors make a corresponding difference in the rates paid at the various furnaces. The proprietors object to this proposal, and so the matter at present rests. The puddlers have since gone to work, but unless the batters go in also, or other men are employed in their places, the puddlers will be thrown out of employment. The extensive firm of Gilkes, Wilson, Pease, and Co., are erecting two large fitting straps for the engineering department of their trade. The ironmasters of North Yorkshire are exporting largely for the Continent. At Rotherham and Mashroff a fair trade is doing in railway wheels. The stove-grate manufacturers are tolerably busy, considering the continuance of the strikes in the building trade. The Rotherham forge has been very actively employed in the execution of solid tyres, and at other works things are looking more healthy.

The Coal Trade has assumed a more active position now that the demand for the winter has commenced. The orders for coals for the London market are very large, but in the manufacturing districts there is less activity, owing to the depression existing in the cotton and woollen trades. The mineral traffic returns, just issued by the Great Northern Railway, show a considerably increased demand. The quantity carried by the company in the month of July, 1861, was 32,048 tons; in August it had increased to 48,439 tons, being an increase of more than 50 per cent. on the month. In September the quantity carried was 43,298 tons. The following is the number of tons sent in the month of September from the South Yorkshire collieries:—Darfield Main, 478 tons; Edmund's Main, 320; Elsecar Colliery (Earl Fitzwilliam's), 4259; High Royds, 300; Hoyland, 247; Lund Hill, 696; Oaks, 1007; Worsbrough Park, 276; Worsbrough Main, 1078; Sillstone (Charlesworth's), 255; Clarke's, 322; Cooper and Co., 1462; Newton and Co., 4328; Smith and Co., 1025; Wharncliffe, 3028; Wentworth, 772; Bainbridge and Co., 320 tons. The total quantity carried by the Great Northern Company from Jan. 1, 1861, to Sept. 30, was 1,205,940 tons; for the same period of 1860, 1,023,754 tons. The coal trade of Derbyshire is very active, and all the collieries are making full time. The Erewash Extension Railway, from Pyle Bridge to Clay Cross, is about being opened for mineral and goods traffic. We have frequently remarked upon the increased population of Whittington, consequent upon the opening of extensive iron-works and collieries, and this week we have to record the establishment of a railway-station in connection with the Midland, for the accommodation of the inhabitants. The station is now open for passenger traffic, and new roads have been constructed, so as to facilitate the approach to it from different parts of the town. Surveys are now being made for a most important link of railway communication between Chesterfield and Sheffield, which, if carried out, will open an immense mineral field between the two towns. The railway distance from Chesterfield to Sheffield is 24 miles; the route by the road is scarcely 12 miles. The object of the present survey is to make a direct line between the two towns, so as to include Dronfield. An immense amount of traffic would be gathered from many points of the proposed route, in addition to the obtaining a good passenger and merchandise traffic.

An explosion took place on Saturday morning, in the High Royds Colliery, near Worsbrough Park, belonging to Messrs. Stanes and Hall, in which two men were severely burnt, and others seriously injured.—An inquest was held on the same day on the body of a man who was killed at the Smithy Bridge Colliery the previous day.—Last week two men were killed in the Mill Dam Mine by the fall of the tub.

Another fatal occurrence has taken place at Mill Dam Mine, by which two men were killed, and a third so much hurt that he is confined to bed. There having been three men killed at this mine within a period of less than three months, and, as rumoured, in consequence of gross negligence, or mismanagement, the attention of the public has been forcibly attracted to the matter. The death of William Oldfield, on July 19, was said to have been caused by some of the men at the bottom of the shaft having unjustifiably rung a bell as a signal to the engine-driver, that he might set the engine to work again, whilst deceased was getting off the chair on which he had been let down the shaft, at a drift some fathoms higher in the shaft, in consequence of which Oldfield was precipitated to the bottom of the mine, and instantly killed. He left a widow and five young children. On this occasion a youth, named Thomas Brocklehurst, the son of one of the men employed at the mine, had charge of the engine, and, although the men working at the bottom of the shaft acted recklessly in giving the signal, the directors were greatly blamed for entrusting this youth with the engine (who, moreover, was a cripple, having lost his hand about a year ago at the same mine, whilst doing something about the machinery). But notwithstanding these catastrophes, the same youth, and another lad about his age, were continued, alternately, to drive the engine until Saturday morning. Sept. 28, when three men, named Martin Chapman, his son Robert, and Aaron Hallam, were descending the shaft to their work. At this time the engine was driven by the other lad, named Thomas Bradwell, also son of one of the workmen. It seems the engine had been thrown out of gear for some purpose, and, on being put into gear again, something, it is supposed the wedge (which is only wood, instead of metal), to hold the spur-wheel, was not properly secured, either through carelessness or ignorance of the lad employed, and caused the rope to slip, and so let the chair on which the men were descending run down the shaft with fearful rapidity to the bottom. Martin Chapman was immediately killed, leaving a widow and large family, but they are most of them grown up. Aaron Hallam lingered until Monday morning, when he also died, leaving a widow and three young children; and the third man, Robert Chapman, had his leg broken, and sustained other injuries, which have confined him to his bed ever since.

The Chairman, secretary, and some of the principal directors of the company reside in Sheffield or neighbourhood, but it is said, none of these persons attended the funerals,

or appear to have taken any interest in the families of any of the poor men killed. T. Bradwell, the youth driving the engine, when examined before the coroner's inquest held on Martin Chapman and Hallam, said that he was over 18 years old. He had, in fact, attained that age a few weeks ago, but he and the other youth, Brocklehurst, who is believed to be younger, have been entrusted to drive the engine nearly two years. The object of stating his age probably had reference to an Act passed last year for the regulation and inspection of Mines (23 and 24 Vic., c. 151), which amongst other things enacts that where the entrance to a mine is by means of a vertical shaft, or pit, it shall not be lawful for the owner of such mine to allow any person other than a male of the age of eighteen years or upwards, to have charge of any steam-engine, or of any part of the machinery, ropes, chains, or other tackle, or by means of which persons are brought up, or passed down, any such vertical shaft or pit, and every person so offending shall be subject to a penalty imposed by the Act of 5 and 6 Vic., c. 99, which penalty is a sum not exceeding 50/-, nor less than 20/-, for every offence, to be recovered (with the expenses attending the recovery) before two Justices of the Peace acting for the county where the offence shall happen. This does not interfere with the right of the families of the deceased to recover compensation. The company measured about 24 tons of ore on Sept. 27, the produce of seven weeks, from the previous measure on Aug. 9.

In last week's *Mining Journal* was recorded the conviction and sentence to four months' imprisonment of Alexander Laird, a colliery manager, for neglecting to adopt due precautions to prevent the flooding of a pit, by which two workmen lost their lives. The case being a very important one, the following letter, besides having reference to the Clay Cross accident, will be read with interest by all engaged in colliery operations:—

"This singular case of conviction is one well deserving public discussion; and a thorough and impartial review of the evidence given in the Glasgow Court by the Crown witnesses, and of all the features of the so-called crime, will, I think, convince the most sceptical that Mr. Laird's imprisonment, short as it is, cannot be reconciled with the principles of justice. In making such a statement as this, I by no means imply that either judge, jury, or counsel were actuated by any feelings of partiality, or that, according to their own convictions, they in the least degree lost sight of the honour and integrity of the law. On the other hand, I think the judge manifested a degree of clemency and kindness towards the prisoner which could scarcely have been anticipated from the verdict. In calling this a singular case of conviction, I mean not only is the verdict somewhat remarkable and astonishing, but that, as far as I know, it is the only one of the kind that has ever been given by a British jury. A short time ago several lives were lost by the inundation of the Clay Cross Colliery, Derbyshire. The workings of the colliery were under the superintendence of a very able engineer, and he was perfectly well aware that the drivage by which the water entered was going in a direction parallel to an old waste full of water, and, according to the plan of the old waste, this drivage was far enough from it for perfect safety; but, alas! the whole of the excavations of the old pit were not shown on the plan, and the water was holed into a point where it was never dredged. The old colliery in this case was commenced by the great George Stephenson himself, and frequently visited by this eminent engineer; and the colliery in which the accident occurred was under the superintendence of Mr. Stephenson's favourite mining engineer. The question of bore-holes was well ventilated in the evidence in this case; but the Act of Parliament simply requires 'that bore-holes be kept in advance of places approaching old wastes.' Now, going parallel to and approaching are of widely different signification. The verdict in the Clay Cross case, given after a most searching investigation, was that of 'Accidental Death.' Let us see in what particulars the Kelvinside Pit case agrees with the Clay Cross one. The 'mine' or drivage in the sandstone was not approaching the waste, but going in a direction parallel to it. The place holed into was not the coal workings of the old waste, but a drivage made upwards into the roof for the purpose of 'proving the fault,' and was not shown on the old plan. The perpetrator of this crime should have been the prisoner in the case. If bore-holes had been used as a precaution in the Clay Cross Colliery, they would have been made in the direction of the old waste, and not in that of the unsuspected place holed into. Bore-holes in the Kelvinside pit would have been made in the direction of the old coal waste, and, as was plainly admitted by the Crown evidence, could not have prevented the accident. In both these cases the cause of accident and loss of life was the neglect of properly and accurately recording the drivages of the old colliery workings. In the Clay Cross case this neglect was made by a subordinate to the manager, under whose supervision the accident took place. In the Kelvin-side Pit case the neglect is due to a man in no way connected with Laird! What was the just verdict? The destruction of human life in coal mining is most deplorable and fearful; and I do not wonder at a judge wishing to do something by way of giving moral effect to what is doubtless a most salutary law, but to imprison an innocent man is assuredly an injustice, however beneficial the example may be."

REPORT FROM MONMOUTH AND SOUTH WALES.

OCT. 10.—Both the Coal and Iron Trades have been brisker for the last few days than for some time. There is a good demand for coal, and large shipments are made. The scarcity of vessels has been severely felt, and necessarily freights run high. The Newport docks are full of large vessels. Within the last fortnight the trade of the port has so materially improved that it was never known to be in a better state. There are nine timber ships now discharging, principally from the Baltic. Messrs. W. Williams and Co. have extensive orders on hand from the eminent contractors, Messrs. Brassey and Co. An extra number of men are employed, and the orders on hand will take the next three months to accomplish. The *Memnon*, one of the largest steamers that ever visited the port, arrived on Friday from Bordeaux. She loaded 817 tons of iron from the Tredegar Company, and 830 tons of coal from the Machen Company, and on Monday evening she was ready to sail. This dispatch in discharging ballast and loading gives great credit to the officials of the port. Freights continue to increase at the three ports. The trade of Cardiff wears a fair better aspect than it has done for the last three months. A large number of ships have arrived, and things look encouraging. At Swansea the arrivals have been more than the average, and business consequently begins to look a little brighter. A number of vessels have been chartered for the Mediterranean and French ports, and freights have an upward tendency. The different iron and coal-works are more busily engaged, and fresh orders have arrived. The Hirwaun Iron-works have now been virtually given up by the Crawshays, as the lease has been allowed to expire without being renewed. The effect of this, it is stated, will be that the extensive plant and machinery will become the property of the lord of the manor. On Monday, Sept. 30, Messrs. Corbett and Clark, the Marquis of Bute's agents, took formal possession of that part of the property which belongs to the Marquis. Various rumours are afloat as to the works being in the market, but nothing definite is yet known.

The South Mostyn Colliery accident is exciting much attention amongst the mining men of this district. From the reports which have appeared in the *Mining Journal*, and the local papers of the neighbourhood where the accident occurred, it appears that the ventilating-fan took fire before the report of the explosion was heard. The destruction of the ventilation prevented hardly any efforts being made for the recovery of the bodies, and consequently choke-damp was the great cause of death on this occasion. The machine is the invention of Mr. W. P. Struve, of Swansea, and a similar one is in use at the Black Vean Colliery, Risca, where about ten months ago 112 persons lost their lives. From the evidence given at that inquest, it is clearly proved that the machine was not in fault on the occasion, and despite the tremendous effects of the explosion the ventilation was not stopped. However, this unfortunate accident at South Mostyn seems to imply a defect in the machine, and we shall see what explanation Mr. Struve will offer. At the Risca inquest he attended, and gave evidence on the competency of the machine. He there said that his patent had expired, and he had not renewed it; therefore, he has no pecuniary interest in the machine. Mr. Lionel Brough, the Government Inspector, in his evidence before the coroner at Risca, while admitting the great capabilities of the machine, said 'Any serious breakage of these machines, or the power that drives them, would be very nearly tantamount to the loss of the entire colliery, or its lengthened suspension.' In another part of his evidence he gives the decided preference to the old mode of ventilation by a furnace, as there would be less danger in case of an accident, and the supply of air would not be limited, as in the case of the machine. When the whole of the evidence given at the South Mostyn inquest is before the public, we shall then be better able to judge where the fault lies.

At the Blackwood Petty Sessions, on Tuesday, before Mr. F. Levick and Capt. Marsh, four colliers were charged with having been concerned in the Abercarn riots. Nearly the same evidence was adduced as on the previous occasion, when twelve men were committed for trial. The magistrates after hearing the evidence, committed all four prisoners, ball being accepted.—Thomas Revington was charged before the same magistrates with neglecting his duty. The defendant was a furnaceman, in the employ of the Rhymey Iron Company, and he left the flue unattended for a whole day and night. The magistrates commented severely on his conduct, and he was fined 20s., or 21 days' imprisonment.

IMPROVED FIRE-BARS.—Some short time since an improved description of fire-bar was introduced by Mr. Joseph Wright, of Birmingham, and so great has been the success attending their use that a company has been formed—the Patent Moveable Fire-Bar Company—for working the unexpired term of the patent. The use of the moveable bars ensures the utmost economy of fuel, combined with the maximum generation of steam; the slag is gradually brought forward from the back of the furnace, where it is formed and deposited on the dead plate at the mouth. Testimonials from the mills and factories certifies that the bars have been in use on the "Prince" for two years, and that they have proved more serviceable than ordinary bars, lasting about double the time, and enabling the stoker to keep his fires cleaner. Messrs. G. B. Thorneycroft and Co. write that they effect a considerable saving in the slack consumed, and also in the repairs of the boilers and brickwork. Messrs. Trow and Sons, of the Sawing, Planing, and Moulding Mills, Wednesbury, get 25 per cent. more steam with 5 per cent. less fuel; and Mr. Felix Webb, of the Patent Tube Works, Wednesbury, considers that they save him 5s. or 6s. per day in slack, that they have paid for themselves many times over, and that though erected in Oct., 1858, they appear (Aug. 30, 1861) to work as well as ever. It may be mentioned that the bars are used on some of the New York mail steamers, and in the iron districts are used for puddling-furnaces, in the place of wrought-iron bars, where they are found to be of great advantage, and that slack can be used instead of coal, as formerly. It has been proved, moreover, that where the bars are properly attended to the smoke nuisance is entirely done away with.

TRIAL OF A NEW LAND STEAM FIRE-ENGINE.—An engine manufactured by Messrs. Shand and Mason, of the Blackfriars-road, was publicly tried at Rosher's Wharf, Holland-street, Blackfriars, on Monday, in the presence of a number of gentlemen, amongst whom were Capt. Shaw, superintendent of the London Fire Brigade; Mr. W. M. Browne, of the Westminster Fire Office; Mr. Zerah Colburn, C.E., Mr. F. Young, C.E., Mr. Charles B. King, M.E., Mr. G. H. Birkbeck, C.E., Mr. Benson, late of Cincinnati, U.S.A. Jets of 1½ inches were projected 154 ft. vertically, and 195 ft. horizontally, and 1½ inches 178 ft. vertically, and 225 ft. horizontally, under an average working pressure of 90 lbs. per square inch. This engine, with two others now in course of completion, comprise an order for the London and North-Western Railway Company.

HEATING FEED WATER.—An invention has been provisionally specified by Mr. Whittam, of Accrington, which relates to certain improved methods of heating feed water. In the pipe which conveys the steam from the cylinder to the condenser, and in the escape-pipe of a high-pressure engine, or in suitable chambers, he places a number of metal boxes, each having a volatile spiral coil. The vessels are united, so as to allow the steam to pass from one to the other and to heat the several coils, and the water passing over the surfaces thus heated is raised to a high temperature.

TRUTH'S ECHOES; OR SAYINGS AND DOINGS IN MINING.

The market has not been an active one. From the general improvement which has taken place in the standard for the raw material, we may reasonably anticipate a better and more satisfactory market for shares.

EAST BASSET shares, which had considerably receded, suddenly advanced on Wednesday, in consequence of a reported improvement. —**NORTH BASSET** shares, which have been in good demand for some time past, have very much declined. —**WHEAL SETON** shares have been in fair request at improved rates, and continue firm. —**SOUTH TOLQUHON** shares have been very much sought after at present rates. —**CODNABURROW** shares have been very much sought after at present rates. —**EAST CAIRN BREA** shares have been firm all the week at advanced prices, and the approaching account will no doubt make them firmer. —**WEST CAIRNADON** shares are offered at lower rates, and not very active at minimum quotations. —**TRELLAWYNT** and **MARY ANN** shares are sought for at improved prices. —**HERDSFOOT** shares are quiet at present prices. —**LUDCOTT** shares have been in good request at buyers' figures, although many have changed hands, waiting, no doubt, the result of the negotiation for the adjoining mine and materials. —**NORTH DOWNS** shares have been largely dealt in, but no important change in the quotations, notwithstanding the mine is reported to possess some improving and cheering prospects. —**NEW TRELEIGH** shares remain without an advance, and shares more freely offered. —**TINCROFT** shares have been in fair request, and transactions have taken place at higher rates. —**STRAIT PARK** shares are heavy at present prices. —**EAST GREENVILLE** shares are less firm. —**FOR GREAT RETALLACK** shares a sudden and active demand has taken place, and several bargains effected at improved rates. —**CARN CAMBORNE** shares find buyers at present quotations. —**GREAT WHEAL MARTHA** shares have been in good demand at improved rates. —**HINGSTON DOWNS** shares have also been largely dealt in, with a dividend of 12s. 6d. per share was declared, carrying to credit of next account 1870L. 1s. 4d., after payment of lord's dues for the quarter, being an increase of 32sL over the previous year. The three-monthly sale of copper ores realised 6444L. 17s. 5d., the average cost of working being about 554L per month. The managing agent's report will be found in *extenso* among the Mining Correspondence of this day's Journal. The caunter lode in the 60 east end is improved, and now worth 35L per fm., and indicative of a further great improvement. The same level west is worth 25L per fm.; about 25 fathoms behind this end they are driving on the part left standing, which is now believed to be the main part of the lode, and is worth 20L per fm. The 50 east is worth 75L per fm. The manager congratulated the meeting on the prospects of the mine, considering they never looked so well as at the present time. —**MARKE VALLEY** meeting was held the same day. The abstract of accounts showed the sale of ores for June, July, and Aug. amounted to 5390L. 8s. 3d., and the costs for the same period, with lord's dues, to be 3061L. 4s. 2d.: leaving a credit balance of 2329L. 4s. 1d. A dividend of 8s. per share was made, after payment of which a balance of 79L. 4s. 1d. on the three months' workings is found. The balance of cash in the banker's hands, after payment of all liabilities and also the above dividend, is given as 3121L. 1s. 8d. The agent's report will be found in another column.

EAST CARBONADON quarterly account was held at Salisbury on Thursday, when a dividend of 12s. 6d. per share was declared, carrying to credit of next account 1870L. 1s. 4d., after payment of lord's dues for the quarter, being an increase of 32sL over the previous year. The three-monthly sale of copper ores realised 6444L. 17s. 5d., the average cost of working being about

from 60% to 10% per fm., and water reported to be in the mine. ALFRED CONSOLS shares have been dealt in from 17s. 6d. to 22s. 6d., being an improvement on last week's prices. EAST BASSET shows every appearance of a lasting and profitable property. An improvement has taken place in the 80 fm. level, which caused a little excitement amongst the "bears," and shares advanced to 75, 80; the lode is worth 40% per fathom. They have every reason to believe that these shares will have a great rise, and should be bought. PROVIDENCE shares have been in demand, and very few are on the market, a great number having been purchased by the public for investment. ROSEWALL HILL AND RANSON UNITED is looking very well, and from the present prospects shares are likely to have an advance. STRAT PARK shares are receding, and likely to go lower, as there is nothing now in the mine to warrant present prices.

EAST CARN BREA shares have been in request, at previous quotations. TRELTON CONSOLS shares remain quiet, but the mine is improving. WHEAL MARGERY shares have been enquired for, and sales effected at advanced rates. The entire mine is selling for the low sum of 8000L. There is all the necessary machinery on the mine, in good order, which will carry operations on for a considerable period. SOUTH DARREX shares are worth attention. The last report is of a highly satisfactory character, and judging from the operations which are being carried on, there is no doubt that in a short time very profitable results will be realized. The shares are at a very low figure, and well worth the attention of those who seek a speculation which has every element of success.

From Mr. E. COOKE.—There has been a larger amount of business done during the past week than for a long time past. The transactions have been both numerous and in many different mines, and a good rise has been established in the respective properties that have been chiefly dealt in. The leading mine of the day is undoubtedly EAST CARON, in which a large business has been done at advanced prices, notwithstanding the cautions and solicitations by interested parties to be consulted on the merits of the property. What a pitiful sight is this to all who desire the welfare of legitimate mining to witness such puny efforts to deprecate this, one of the best and most respectfully managed mine that has been brought before the notice of the public for many years. Some two years since the shares in this mine were selling at a few shillings each; since dividends of 2s. 6d., 5s., 10s., and on the 9th inst. 12s. 6d. have been declared, and the prospective one is 15s. Hence we contend that East Caron must be classed among the very best mines that was ever brought before the public, and one that will be a good and steady investment for many years to come. We ventured in our last to predict that SONTRIDGE CONSOLS were worth buying. The price was then 9s. 6d. to 10s. 6d. Not having any interest personally in the mine, we may be pardoned for again reiterating our opinion that the prospects warrant the shares yet attaining a higher figure. EAST CARN BREA shares have again improved in price. With such prospects of becoming a dividend property as this mine presents, a slight reaction in the price of the shares should cause no alarm to the shareholders. NORTH BASSET shares have receded from 8s. buyers, to 8s. 10s. sellers. This reaction alone would warrant us in saying that a few shares could harm no one at current price; but, independent of this, the mine having been before the public for several years, and at one period a good dividend one, is very sensitive of any change that may take place. GREAT RETAILACK shares receded at one period during the week to 10s., but have since advanced to 21s. The chances of this becoming a lead mine in depth are becoming more apparent than ever; we, therefore, consider the mine exceedingly cheap at current price. HINGSTON DOWNS CONSOLS shares have been largely dealt in. The late improvements in this mine justify the expectation of it again becoming a dividend property. The shares have had a slight reaction, but they are advancing again. WHEAL GRIFFS shares still maintain their late advance, and we know of no mine that presents better chances for considerable rise than this. There are several mines that may be safely invested in at present prices, which are now selling below their intrinsic value.

THAMES TUNNEL COMPANY.—Receipts for the week ending October 5, 661. 15s. 8d.; number of passengers, 16,028.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending October 6 was 11,997. 18s. 2d.

IMPORTANT TO ENGINEERS, IRONFOUNDERS, AND IRON DEALERS.—The UNDERSIGNED have RECEIVED from the mortgagors of an insolvent manufacturing concern in the North a CONSIGNMENT of the UNDEMENTIONED GOODS, which are now OFFERED FOR SALE BY PRIVATE CONTRACT:

FINISHED BEST SCRAP BAR IRON.
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SCRAP STEEL, SPRING STEEL, and SPRING STEEL IRON.
TWELVE TONS BEST RIVETS, assorted.
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ENGINE CASTINGS, CAST IRON PILLARS.
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ASSOCIATION OF BRITISH INVENTORS.—The determined hostility evinced in certain influential quarters towards patent property, and the strenuous efforts which will probably be made during the next Session of Parliament to alter the Laws Relating to Patents, have rendered it desirable that an Association of Inventors, and of those interested in the working of patents, should immediately be organised.

Gentlemen willing to assist in forming the Association are requested to communicate at once with R. MARSDEN LATHAM, Hon. Secy., 71, Fleet-street, London.

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The proprietors have great pleasure in recommending the above as the simplest and best arrangement in use. The bars have already been adopted by some of the leading firms in the Midland Iron District, in various channel and ocean-going steamers, and the large breweries in Burton, and have, in every case, given great satisfaction.

For prices charged, apply at the company's office, Liverpool.

AGENTS WANTED: also, TENDERS from ironfounders for CASTING the BARS.

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J. APPLEY, Esq.

J. HARDING, Esq.

BANKERS.—The London and Westminster Bank (Temple Bar Branch).

STANDING COUNSEL.—Thomas Dunbar Ingram, Esq.

SOLICITORS.—Messrs. Gold and Son, 2, Whitefriars-street.

SECRETARY.—R. Griffith Schofield, Esq.

The Managers of the Professional and General Protection Offices, in the course of business, having received numerous applications from their members in different parts of the country to negotiate loans, and in consequence of the increasing demand for pecuniary accommodation, and the very heavy rate of interest charged, together with the railroads costs incurred, have determined on establishing a company, which will enable an honest man to preserve himself from ruin at a time of pecuniary embarrassment without recourse to assistance which must eventually prove disastrous to his interests.

The objects of the company are as follow:—To advance sums from £5 to £10,000 upon all kinds of available and approved security, —viz., Freehold, leasehold, copyhold, personal, deposit of deeds, dock warrants, bills of sale, bills of exchange, promissory notes, book debts, &c., at the lowest rate of interest consistent with safety and the interests of the shareholders.

The peculiar features of the company are as follow:—

1.—The company is established under the Limited Liability Act, which limits the liability of the shareholder to the amount of his shares only.

2.—The shares are £5 each; and to enable all classes (particularly working men) to become shareholders the shares are to be paid on the same principle as building and freehold land society shares, —by instalments, until the full amount is paid.

3.—The monthly contribution on each share is five shillings.

4.—Shareholders to be allowed to draw two-thirds of the amount paid by them at any time, at the ordinary rates of interest, on their own responsibility only, without affecting the profits accruing on their shares.

5.—The discounting business conducted at the current rate.

6.—All transactions with the company treated with the most perfect secrecy.

7.—Deposits received and interest allowed at the current rate.

8.—Shares may be paid in full, and a proper discount for immediate payment allowed.

9.—Interest on the shares at 6 (six) per cent., payable from the profits half-yearly.

10.—Annual balance-sheets.

Full particulars and forms of application may be had on application to the secretary.

FIFTEEN to TWENTY, and even TWENTY-FIVE PER CENT. PER ANNUM upon current value of shares, in CORNISH TIN and COPPER MINES.

Dividends payable two-monthly or quarterly.

Review of Cornish and Devon Mining Enterprise, 5s. per copy.

Maps per post of the Basset and Basset, Great Vor, Alfred Consols, the Providence and Margaret Districts, 2s. 6d. each.

Cornish Mines, well selected, pay better than any other description of securities, are free from risks, and entail less responsibilities than banks and other joint-stock companies. Shares bought and sold on commission of 2½ per cent.

Money advanced at 10 per cent. annually, for short or long periods, upon approved Mining Shares.—78, Lombard-street, London, E.C.

TELEGRAPHIC messages promptly attended to.

Bankers: Bank of England.

Board of Admiralty, Somerset House.

CONTRACT FOR COALS FOR CALLAO.—THE COMMISSIONERS FOR EXECUTING THE OFFICE OF LORD HIGH ADMIRAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND do hereby give notice that, on Tuesday, the 15th inst., at Two o'clock, they will be READY to TREAT with such persons as may be willing to CONTRACT for SUPPLYING and delivering at Callao—

FIVE HUNDRED TONS OF SOUTH WALES COALS,

Fit for the service of Her Majesty's steam vessels.

The conditions of the contract, and a form of the tender, may be seen at the said office. No tender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Coals for Callao," and must also be delivered at Somersett-place, accompanied by a letter signed by a responsible person, engaging to become bound with the person tendering in the sum of £400 for the due performance of the contract.

Department of the Storekeeper General of the Navy, Somersett-place, October 3, 1861.

WISCONSIN MINING AND SMELTING COMPANY (LIMITED).

In 9000 shares of 20s. each; 10s. on application, and 10s. on allotment.

DIRECTORS.

Lieut.-Colonel ABBOTT, 9, Portman-road, Maida Hill.

Rev. ALFRED WALNE, LL.B., Banbury, Cheshire.

E. NICHOLAS, Esq., surgeon, 43, Barbican.

SOLICITORS.—Messrs. Hobbs and Weedon.

SECRETARY.—Wm. Walne, Esq.

OFFICES,—63, CORNHILL, LONDON.

It is well known that one of the richest deposits of lead ore exists in the region of the State of Wisconsin; and although three-quarters of a million pigs of lead (or 71 lbs. each) are raised annually by poor labouring miners without any capital, it has yet to be developed by properly-directed mining enterprise. This mine is really discovered; most of the speculative work effected; and valuable ledges laid open for a considerable distance, that will simply require the necessary appliances to bring the mine into a profitable state. In comparing the future prospects with the past, the following are the particulars:—The poor miners before alluded to paid 6s. 8d. in 12. royalty. The future royalty is 1s. 4d.; and by smelting the ore on the mine a profit of 25 per cent. will be effected, leaving a clear profit of 10s. 4d. in 12. compared with the past working.

The ores are worth 80 per cent. for lead; and very little more will be required than the necessary houses, plant, and machinery to bring the mine into a dividend-paying state, and 3000 shares will be issued at 20s. each for that purpose. The mine has been thoroughly mapped and inspected by a Cornish mining agent.

Prospectus, agent's report, and forms of application for shares may be obtained at the office of the company, 63, Cornhill, London.

THE CHESTERFIELD AND MIDLAND SILKSTONE COLLIERY COMPANY (LIMITED).

Capital £40,000 in 8000 shares of £5 each (with power to increase).

J. SAY SPARKES, Esq., H.E.L.C.S., Brunswick Villas, St. John's Wood, London, W. WILLIAM MITCHELL, Esq., 54, Gracechurch-street, London, E.C.

HENRY BROWNHILL, Esq., 33, Lime-street, London, E.C.

GEORGE BROCKLEBANK, Esq., Gloucester-place, Greenwich.

GEORGE SENIOR, Esq., Coalowner, Barnsley.

Major CHARLES SANDERS, The Ingrams, Thirsk.

(With power to add to their number.)

MANAGING DIRECTOR.—John Say Sparkes, Esq., H.E.L.C.S.

BANKERS.—London and County Joint Stock, Lombard-street, London, E.C.

SOLICITORS.—Messrs. Courtenay and Croome, 9, Gracechurch-street, London, E.C.

AUDITORS.—Messrs. Cooper Brothers, Public Accountants, 13, George-st., Mansion-house.

BROKER.—Charles W. Marten, Esq., 26, Throgmorton-street, London, E.C.

CONSULTING COLLIERY ENGINEERS.—Messrs. Brown and Jeacock, Sheffield and Barnsley.

SECRETARY AND ENGINEER.—James Wright, Esq., C.E.

OFFICES.—LONDON, 42, BRIDGE STREET, BLACKFRIARS.

ABRIDGED PROSPECTUS.

This company is incorporated for the purpose of establishing a colliery, and raising the well-known Silkstone coal upon the estates of the Dukes of Devonshire and Rutland, at Sheepbridge, in the vicinity of Chesterfield.

From accurate surveys made by the most eminent mineral engineers, the directors can with confidence predict that the returns upon the capital will, at the very least, be 21 per cent., while the facilities for winning the coal are such as to render it almost a certainty that dividends will be paid within twelve months from the commencement of the works.

The coal is the Silkstone, well known as the best suited for domestic use, and for which the demand, both in the locality of the works as well as in London, is almost unlimited, and at the highest prices.

From the reports given by different mineral surveyors, and taking the highest of their estimates, it will be seen that the coal can be raised, and put into the railway wagons at a cost not exceeding 4s. 6d. per ton (including all royalties, expense of management, and a fair allowance for the redemption of capital expended in opening the colliery). After deducting these from the lowest prices now ruling in the neighbourhood, there is left a clear average profit of 1s. per ton, or an annual income of £8750, being upwards of 22 per cent. on the total capital of £40,000, even should the whole be required.

Although the directors have fixed the capital nominally at £40,000, it is almost certain that little over two-thirds of that amount will ever be required; hence it is thought probable that the total calls on each share will not exceed £3 10s. at most; these will be asked for in 10s. per share on application, £1 on allotment, and the remainder in calls of £1 each as required; and in no case will the calls be at less intervals than three months; and unless at least one-half of the capital be subscribed, all deposits will be returned in full.

Surveyor's reports, together with prospectuses, and forms of application, may be had at the company's office, 42, Bridge-street, Blackfriars, London, E.C.

THE CHESTERFIELD AND MIDLAND SILKSTONE COLLIERY COMPANY (LIMITED).

All APPLICATIONS FOR SHARES in this company MUST BE MADE on or BEFORE the 27th inst., after which time the list will be closed, and the allocation of shares proceeded with according to priority of application.

J. WRIGHT, Sec.

42, Bridge-street, Blackfriars.

CHARD AND TAUNTON RAILWAY (Connecting the South-Western and Bristol and Exeter Railways).

Capital £120,000, in shares of £10 each. Deposit, £1 5s. per share.

Interest at the rate of 3 per cent. per annum will be paid on calls during construction.

The works are expected to be completed in about eighteen months from the time of commencement.

PROMOTERS.

The Right Hon. EARL POULETT.

The Right Hon. LORD PORTMAN.

[OCT. 12, 1861.]

DODDS' IRON AND STEEL PATENT LICENSING COMPANY (LIMITED).

This company is PREPARED to GRANT LICENSES on moderate terms for the USE of their PATENT for STEELING RAILS, POINTS, CROSSINGS, MACHINERY, and EVERY DESCRIPTION of IRONWORK.

The process, which is exceedingly reasonable in cost, and gives the most extraordinary durability to the material, has been highly approved of by the following gentlemen, firms, and companies, several of whom have extensively adopted the valuable improvement:

ROBERT STEPHENSON, Esq.

JOHN BOURNE, Esq.

J. PERRING, Esq.

THOS. E. HARRISON, Esq.

THE GREAT INDIAN PENINSULA RAILWAY COMPANY.

THE NORTH-EASTERN RAILWAY COMPANY.

MESSRS. STEPHENSON AND CO.

THE EAST LANCASHIRE RAILWAY COMPANY.

THE GREAT NORTHERN RAILWAY COMPANY.

THE MIDLAND RAILWAY COMPANY.

THE METROPOLITAN RAILWAY COMPANY have ordered a large quantity of rails by this process.

The FOLLOWING FIRMS are PREPARED to EXECUTE ORDERS under the company's patent:

MESSRS. S. BEALE AND CO., PARK GATE, ROTHERHAM.

MESSRS. DODDS AND SON, ROTHERHAM.

MESSRS. LOSH, WILSON, AND BELL, NEWCASTLE-ON-TYNE.

THE EBBO VALE COMPANY, SOUTH WALES.

MESSRS. LEVICK AND SIMPSON, NEWPORT, MONMOUTHSHIRE.

MESSRS. LLOYD, FOSTERS, AND CO., WEDNESBURY.

THE ISCA FOUNDRY COMPANY, NEWPORT, MONMOUTHSHIRE.

Applications for Licences can be made to R. COOKE, Esq., at the company's offices, No. 7, Saxe-lane, London, E.C., where also testimonials and other information may be obtained.

THE GENERAL TRAM-RAILROAD COMPANY (LIMITED).

Notice is hereby given, that NO APPLICATION FOR SHARES can be RECEIVED by the directors of this company AFTER SATURDAY, the 19th inst.

By order, JOSEPH KAIMES, Sec. pro tem.

82, Gresham House, Old Broad-street, October 9, 1861.

THE LONDON AND PROVINCIAL AGRICULTURAL COMPANY (LIMITED).

Registered under the Act of Parliament, which limits the liability to the amount of shares taken.

Capital £100,000, in shares of £1 each; 10s. paid, 2s. 6d. deposit.

DIRECTORS.

Major-General PEMBERTON, York House, Chertsey, Surrey.

HENRY WETTON, Esq., Chertsey, Surrey.

EDWARD HUNT, Esq., Sydenham Villa, Sydenham-road, Bristol.

W. B. BODDY, Esq., M.D., Saville-row, Walworth, London.

WILLIAM RETIGAN, Esq., Crescent, Carlisle.

SOLICITORS.—MESSRS. GROVER and ELDRED, 8, Great James-street, Bedford-row, London.

AUDITORS.

MESSRS. COOPER BROTHERS and CO., PUBLIC ACCOUNTANTS, 13, George-street, Mansion House, E.C.; and MESSRS. BURBIDGE and FLETCHER, PUBLIC ACCOUNTANTS, 61, Moorgate-st., E.C.

BANKERS.—The London and County Bank, Lombard-street, London.

BROKERS.—F. EVERETT, Esq., 16 and 17, Royal Exchange.

W. H. POUNTNEY, Esq., 5, Royal Exchange, Manchester.

W. K. THOMAS, Esq., 23, Clare-street, Bristol.

THOMAS MILLER, Esq., 72, Princes-street, Edinburgh.

MESSRS. STEVENS and CO., Dublin.

MESSRS. ORR and CO., Belfast.

MANAGER.—Mr. Thomas Retigan.

CHIEF OFFICE.—40, MARK LANE, LONDON.

MANUFACTORIES.—ALBERT WORKS, NIGHTINGALE STREET, STRANGWAYS, MANCHESTER; and

CARLISLE WORKS, ABBEY TOWN, NEAR CARLISLE.

The above company has been established for the more extended manufacture of the Royal Patent Compound Oil Cake for Cattle, the Compound Feeding Meal, the original Economic Food for Cattle, and patented Superphosphate, and other standard Chemical Manures, at such prices as will amply remunerate the company and, at the same time, insure the extensive patronage of consumers, who can also participate in the profits by investing in its shares.

Ten years ago oil cake, as an article of import for feeding, was comparatively unknown. Now the annual imports alone exceed 95,000 tons, and the deep interest with which the chemist and farmer now regard the character and adopt the use of manufactured foods and cake as essential auxiliaries to improve and vary the coarse produce in plentiful times, as effective substitutes in periods of scarcity, are valuable aids in forming manure after they have fattened cattle, defines the position which their production has assumed as a staple trade associated with the agricultural progress of our time.

Our guano imports have doubled, and we now obtain foreign supplies of bones to the extent of 85,000 tons. The scope which is presented in the manure branch of this business may be estimated, as we can but indicate the range it commands in the use of materials, skill of manufacture, and certainty of enormous consumption. The productions which the company proposes to manufacture have been for the last three years before the public, and the unimpeachable testimony of the first agriculturalists, and the prize lists of all the agricultural shows, show their position and popularity.

Such has been the daily increasing demand that enlarged mills and mechanical facilities are now required to supply it, and this company has, therefore, been designed.

The late proprietors have transferred to the company the Manchester mill and machinery, utensils and office furniture, the patent, and all other property, their business connections and practical experience in the management, and have taken shares for the whole amount of their interest and the capital invested.

One of the directors, owing to the demand of the district in which he resides, has also formally undertaken to fit up with all necessary machinery and work a mill, called Carlisle Works, Albany Town, near Carlisle, furnishing all the capital required, and receiving shares in return for his outlay.

Negotiations are in progress to effect similar arrangements in London, where there are 3000 dairymen alone to supply, and in Scotland and Dublin, so as to cheapen carriage. The company will thus facilitate consumption at once, start with an established business in extensive demand, a staff of 500 agents to extend it, and the mechanical capabilities of two large manufacturers to furnish an immediate supply.

It is estimated that the Manchester mill can produce gross return in cake, meal, and food alone of £800 per week, and that the Carlisle mill can return about £500 per week, making a total of £1300 per week, the profits upon which, necessarily private from the nature of the business, will provide an ample margin for a dividend of from 20 to 30 per cent. upon the capital invested. The erection of wooden sheds adjacent to these mills will be all that is necessary to enable them to make a sale of 1000 tons (say £5000 worth) of manure per annum, a mere moiety of the demand of the districts.

In anticipating the results of the operations of the company on the wide basis on which it rests, it has been calculated that with the 500 agents now connected with the company, and exclusively a London trader, supposing them to average a return of only ½ cwt. of food and ½ ton of cake per week each, the gross returns of the company will be, in round numbers, £182,000 per annum. Assuming that they double that return, you have £364,000 per annum, and we may be allowed to observe that this average return falls far short of what the working agents during the late proprietors' experience effected. The United Kingdom cannot be well covered under 1000 agents, and assuming their return to be on the basis of the first calculation, you still have £364,000 per annum income, while this latter calculation can be considerably increased by addition to the business which the agents may effect, or which may be received from direct customers.

The cost of production and working expenses would, of course, be much less upon the return than a smaller one. And through the same connection it would be but a moderate expectation to effect a return of 5000 tons of manure, which, at 2s. per ton, would be £25,000 per annum.

Sufficient has now been stated, in the limited space of a prospectus, to prove that an exceptional opportunity is presented for effecting a profitable investment in a commercial business, which, being established and peculiar, lucrative, and patented, possesses every element to secure prosperity, and offers an unprecedented advantage to the investor. And the directors are confident in the belief that the undertaking will receive that support to which it is entitled by the objects it has in view, from all persons interested in agricultural matters, as well as from those whose only desire is to make a successful investment.

The full prospectus, circulars, and share application forms, can be obtained from all the local agents, the brokers, auditors, bankers, and solicitors; and from the secretary, at the chief offices of the company.

TESTIMONIALS.

The following are a few out of thousands of testimonials that have been voluntarily rendered, while the number of customers who signify their approval in another mode, repeating their orders and continuing their custom, could not well be calculated:

Royal Farm, Windsor, Feb. 20, 1861.

GENTLEMEN.—Please to send me 1 ton of your Royal Patent Cake, per rail to Windsor station, directed to H.R.H. the Prince Consort, Norfolk Farm, invoice to me, which will oblige. I have used your two boxes of cake sent me on one occasion, and find that he did well, and altogether satisfactorily. I now feel inclined to give it a more extensive trial.

I am, gentlemen, your obedient servant,

JAMES BRENNER.

Steward to T. T. Gascoigne, Craignish Castle, Renfrewshire.

Derrymby House, near Frankford, King's County, May 7, 1860.

GENTLEMEN.—In this instance I shall depart from the rule I have laid down of refusing testimonials. It is only very recently I discovered the real value of your Cattle Food, from the fact of the present scarcity of fodder, and its high price. My horses for the last month have been living on old straw, cut up with gorse, which, with a measure of your Food to each, they eat with avidity, and do not lose their condition. I am also able to speak favourably of it in its effects on cattle; in one instance in particular, that of a mitch cow that was hide-bound. I found that after a week's feeding with your Food the skin gradually softened, the old hair fell off, and the quantity of milk considerably increased. I am quite convinced that, independent of its nutritive properties, its value as a condiment, mixed with inferior food, is of considerable importance to farmers, especially in a season of scarceness like the present.

I am, gentlemen, yours most respectfully,

JOHN SILLS.

Craignish Castle, N.B., Dec. 31, 1860.

GENTLEMEN.—Having been from home, yours of the 11th inst. has only just come to hand. The ton of Royal Patent Cake I had from you was preferable to any other cake I have tried, both for cattle and sheep. I have great pleasure in bearing testimony to its superiority over any other food I ever used.

I am, gentlemen, yours very truly,

SIMON FRAZER.

Steward to T. T. Gascoigne, Craignish Castle, Renfrewshire.

Derrymby House, near Frankford, King's County, May 7, 1860.

GENTLEMEN.—In this instance I shall depart from the rule I have laid down of refusing testimonials. It is only very recently I discovered the real value of your Cattle Food, from the fact of the present scarcity of fodder, and its high price. My horses for the last month have been living on old straw, cut up with gorse, which, with a measure of your Food to each, they eat with avidity, and do not lose their condition. I am also able to speak favourably of it in its effects on cattle; in one instance in particular, that of a mitch cow that was hide-bound. I found that after a week's feeding with your Food the skin gradually softened, the old hair fell off, and the quantity of milk considerably increased. I am quite convinced that, independent of its nutritive properties, its value as a condiment, mixed with inferior food, is of considerable importance to farmers, especially in a season of scarceness like the present.

I am, gentlemen, yours most respectfully,

JOHN SILLS.

Churton, near Chester, Nov. 29, 1859.

DEAR SIRS.—I may as well state, for my own pleasure and your gratification, that about a month ago yesterday I began to feed a store pig of six score ten to seven score, and upon killing him yesterday he weighed ten score. All that he had was 10s. worth of pig meat and 10s. worth of your Food, mixed with the usual slop of the house, which is pretty good. I am now trying a calf upon it. I will let you know the result. I am giving it to the mother of the calf, a young heifer, first calf, and she gives six quarts to a meal, which we consider very good, and I attribute it to your Food.

Yours most faithfully,

T. R. SHARKLIN.

Also from Mr. Welch, Nantwich.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the SWANPOOL MINING COMPANY (LIMITED), and in the MATTER of the JOINT-STOCK COMPANIES ACTS, 1856-57.—By direction of His Honour the Vice-Warden of the said Stannaries, notice is hereby given, that the Registrar of the said Court will, at his office, situate at Truro, in the county of Cornwall, on Wednesday, the 23rd day of October inst., at Eleven o'clock in the forenoon precisely, PROCEED TO SETTLE the LIST of CONTRIBUTORIES of this company, and that after such list shall have been settled no party affected thereby will be allowed to dispute the same without leave of the said Court first had and obtained.

WM. MICHELL, Registrar.

Dated Registrar's Office, Truro, October 4, 1861.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

In the Consolidated Causes of PASCOE AND OTHERS v. DALE.

ORGAN v. SAME.

ALLEN v. SAME.

LANON AND ANOTHER v. SAME.

IN RE GREAT NORTH TOLGUS MINE.

TO BE SOLD, pursuant to the several Orders made in the above-mentioned Causes, and bearing date respectively the 16th day of August last, BY PUBLIC AUCTION, at Great North Tolgus Mine, in the parish of Redruth, within the said Stannaries, on Monday, the 21st day of October inst., at Eleven o'clock in the forenoon, either together or in lots, the MINING MACHINERY and MATERIALS at and upon the said mine, or belonging thereto, or to the adventurers therein, particulars of which appear in handbills.

For viewing the same, application may be made to Mr. TONKIN, the officer of the Court in possession; and for further particulars, to Mr. STOKES, Solicitor, Truro; or to

Messrs. HODGE, HOCKIN, and MARRACK, Solicitors, Truro

(Agents for Mr. Downing, Solicitor, Redruth).

Dated Registrar's Office, Truro, October 3, 1861.

TREFULACK UNITED MINES, ST. ENODER.

MR. GREENWOOD has been favoured with instructions to SELL, BY PUBLIC AUCTION, on Tuesday, the 15th of October inst., at Trefulack United Mine, the following MACHINERY and MATERIALS, viz.:—

ONE 64 in. cylinder PUMPING ENGINE, with ONE BOILER 11 tons.

1 balance bob, new.

3 14 in. ft. doorpieces.

1 15 in. H. piece.

1 15 in. top doorpiece.

2 15 in. 6 ft. ft. windshores.

100 fms. whim chain.

100 fms. capstan rope.

20 15 in. 9 ft. pumps.

5 16 in. 9 ft. pumps.

2 14 in. 12 ft. workings.

1 14 in. 10 ft. sinking windshore.

Rod door and flange pins, of different sizes; clacks, valves, &c.; staples and glands; 70 fms. of iron stave iadvers, new; 30 fms. of 2½ in. iron bucket rods, of best iron; 4 bucket prongs; 3 cisterns; 4 horse whm kibbles; 3 horse whm, with poppet heads and stands, new; 120 fms. of whim rope, new; scales, beam, and weights; several wheelbarrows; 140 in. smiths' bellows, anvil, 2 vices, screw-stocks, and tools; 2½ tons of new iron; cast and wrought scrap iron; smiths' and miners' tools; miners' chests; bell and stand; carpenter's shop; carpenter's bench, pit frame, &c.; 300 ft. of Norway timber, new; large quantity of shaft plank, and other useful timber; hemp; tackle rope; pick and shovel hilt; miners' shovels and powder cans; also the household furniture, and sundry other lots, too numerous to mention.

Refreshments on the table at Ten o'clock, and the sale to commence at Eleven precisely.

R. GREENWOOD, Auctioneer.

TREVOOLE MINE, NEAR CAMBORNE.

FOUR THOUSAND POUNDS WORTH OF VERY SUPERIOR MACHINERY AND MATERIALS FOR SALE, BY PUBLIC AUCTION.

MR. GREENWOOD has been favoured with instructions to SELL, BY AUCTION, at Trevoole Mine, the following MACHINERY and MATERIALS, viz.:—

BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK OF SECOND-HAND MINING MATERIALS FOR SALE. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

B AILEY'S PATENT STEAM GAUGE.—This truly valuable invention is most undoubtedly the only gauge ever invented not affected by those atmospheric changes and many other evil influences, which are the bane of all spring, mercurial, and compressed air gauges.

The grand principle of the gauge being founded upon that sublime law of nature, "GRANVITY," which, like all other natural laws, is unerring and unchangeable—it must continue to indicate correctly to an indefinite period of time.

After most critical trials and examinations by some of the most eminent locomotive and stationary engineers, mining and manufacturing companies in this kingdom, it is pronounced by them to be "THE ONLY TRULY INDICATING GAUGE NOW IN EXISTENCE."

HEAD OFFICES.
MANUFACTORY.
30, COOPER STREET, MANCHESTER, MR. WM. TATE, Sole Wholesale Agent.

ALBION TURRET CLOCK WORKS, SALFORD, MANCHESTER.

INCRUSTATION OF STEAM BOILERS.—EASTON'S PATENT BOILER FLUID EFFECTUALLY REMOVES and PREVENTS INCRUSTATION in STEAM BOILERS, WITHOUT INJURY to the METAL, with GREAT SAVING in FUEL, and with LESS LIABILITY to ACCIDENT from EXPLOSION. It is used by Her Majesty's Steam Shoreships, Woolwich Arsenal, Honourable Corporation of Trinity House, Tower of London, India Store Department, by the principal Steam Packet Companies of London, Liverpool, Southampton, Hull, &c., and by engineers, builders, railway companies, and manufacturers throughout the country. Testimonials from eminent engineers, boiler makers, and manufacturers, with full particulars, will be forwarded on application to P. S. EASTON and G. SPRINGFIELD, sole manufacturers and patentees, Nos. 37, 38, and 39, Wapping-wall, London, E.

AGENTS IN GREAT BRITAIN.
Aberdeen, Mr. James F. Wood.
Aston-under-Lyne, Mr. S. G. Fielden.
Belfast, Mr. W. T. Matson.
Birmingham, Mr. Adam Dixon.
Chester, Mr. W. A. Rowland.
Devonport, Mr. Cornelius Boulds.
Dublin, Mr. Wm. Fith.
Frome, Mr. W. B. Harvey, Chemist.
Glasgow, Mr. W. M. Mutrie.
Hartlepool, Mr. W. T. Cheeseman, West Hartlepool.
Hull, Messrs. A. L. Fleming and Co.

FOREIGN.
Rio de Janeiro, Messrs. Miers Brothers and Mayor, Engineers.
Odessa and South Russia, Mr. W. Baxter, Engineer, Nicolaef.

HALL AND WELLS, PATENTEES AND MANUFACTURERS OF SUBMARINE TELEGRAPH CORES, CABLES, &c.—TELEGRAPH CONDUCTORS INSULATED WITH INDIA RUBBER at £5 per mile and upwards. CORES WARRANTED TO STAND the USUAL TEST for INSULATION. Further particulars as to price of cores, cables, &c., can be had on application at 60, Aldermanbury, City, E.C.; and Steam Mills, Mansfield-street, Borough-road, Southwark, S.E.

Copper wire covered with silk, cotton, or any other material, to order.

SARL AND SONS, 17 and 18, CORNHILL, respectfully SOLICIT A VISIT to their magnificent ESTABLISHMENT. The ground floor is more particularly devoted to the display of FINE GOLD JEWELLERY, GOLD and SILVER WATCHES, and FINE GOLD CHAINS. The SILVER PLATE DEPARTMENT is in the gallery of the building, and consists of every article requisite for the table and sideboard.

In the magnificent show-rooms is displayed a large and beautiful stock of ARGENTINE PLATE, the manufacture of which has stood the test of 20 years' experience.

SARL AND SONS have also fitted up a separate show-room for the display of DRAWINGS and DINING ROOM CLOCKS of the most exquisite designs. Books containing drawings and prices may be had upon application.

SARL AND SONS, 17 and 18, CORNHILL, LONDON.

THE QUARTERLY REVIEW, No. CCXX., is published this day.

CONTENTS:—

- I.—SHIELLEY'S LIFE AND CHARACTER.
- II.—LIFE, ENTERPRISE, AND PERIL IN COAL MINES.
- III.—IMMUTABILITY OF THE LAWS OF NATURE.
- IV.—NEWTON AS A SCIENTIFIC DISCOVERER.
- V.—GROWTH OF ENGLISH POETRY.
- VI.—PLUTARCH.
- VII.—EDUCATION OF THE POOR.
- VIII.—ALEXIS DE TOCQUEVILLE.
- IX.—ADJUSTMENT OF THE CHURCH RATE QUESTION.

John Murray, Albemarle-street.

THE IRONMONGER, AND METAL TRADES ADVERTISER.

A Monthly Trade Circular. Entered at Stationers' Hall, and registered for transmission abroad. Office, 24, Bow-lane, London, E.C.

The Ironmonger is published on the last day of every month, and supplied to the trade only for the sum of 5s. per annum, post free. It contains Leading Articles, Mirror of the month, List of Contracts open, Extracts, Trade Reports, Price Currents and Statistics, Reports of Trade Meetings, &c., List of English and Foreign Patents, and Novelties (illustrated when necessary), Correspondence, Gazette, and other matters interesting to the trade, specially selected and arranged for its columns.

Manufacturers and wholesale houses will find this journal the best possible medium for bringing their articles before the trade, no expense being spared in its introduction at home and abroad, wherever the English language is spoken, and a permanent English and Foreign circulation of several thousands per month being guaranteed. Scale of charges for advertisements:—Page, 35s.; half page, 20s.; quarter page, 12s. 6d.; per word, 1d. Assistants' advertisements, not exceeding 24 words, will be inserted for 1s. each.

INVESTMENTS IN BRITISH MINES.—Mr. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING, giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, the DIVIDENDS PAID, &c.; price One Shilling. RELIABLE INFORMATION and ADVICE will at any time be given by Mr. MURCHISON, either personally or by letter, at his Offices, No. 117, BISHOPS-GATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

OPINIONS OF THE PRESS ON MR. MURCHISON'S WORK ON BRITISH MINING, PUBLISHED IN 1856.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—*Mining Journal*.

The book will be found extremely valuable.—*Observer*.

A valuable guide to investors.—*Herapath*.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—*Morning Herald*.

A valuable little book.—*Globe*.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—*Morning Chronicle*.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—*Derby Telegraph*.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—*Ledger Times*.

To those who wish to invest capital in British Mines, this work is of the first importance.—*Welshman*.

This is really a practical work for the capitalist.—*Stockport Advertiser*.

This work enables the capitalist to invest on sound principles; in truth, it is an excellent guide.—*Plymouth Journal*.

All who have invested, or intend to invest, in mines, would do well to consult this very useful work.—*Ipswich Express*.

Persons desirous to invest their capital in mining speculations, will find this work a useful guide.—*Warwick Advertiser*.

We believe a more useful publication, or one more to be depended on, cannot be found.—*Plymouth Herald*.

Those interested in mining affairs, or who are desirous of becoming speculators should obtain and carefully peruse the work.—*Monmouth Beacon*.

With such a work in print, it would be gross neglect in an investor not to consult before laying out his capital.—*Poole Herald*.

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book.—*North Wales Chronicle*.

Mr. Murchison will be a safe and trustworthy guide, so far as British Mines are concerned.—*Bath Express*.

A very valuable book.—*Cornwall Gazette*. [Glasgow Examiner.

All who have invested, or intend to invest, in mines should pursue this able work.

Is deserving the attention of every one who seeks profitable investment of his capital.—*Brighton Examiner*.

Of great value to capitalists.—*Sunderland Times*.

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THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764).

Published every Saturday, price 2d., or quarterly 2s. 2d.

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TWENTY THOUSAND COPIES OF A MEDICAL BOOK for gratuitous circulation. HENRY SMITH, Doctor of Medicine of the Royal University of Jena, &c., who has devoted 15 years to the study and Treatment of Nervous Diseases, Loss of Memory, and Indigestion, will send free, for the benefit of Nervous Sufferers, a copy of the NEW MEDICAL GUIDE, containing his highly successful mode of treatment, with necessary instructions by which sufferers may obtain a cure. Post free on receipt of a stamped directed envelope, from the author's residence, 8, Burton Crescent, Tavistock-square, London, W.C.

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THE MIDLAND WAGON COMPANY, BIRMINGHAM, RAILWAY TRUCKS ON HIRE OR SALE. BENNETT'S-HILL, BIRMINGHAM, OCTOBER, 1861.

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JOB TAYLOR AND CO., SWAN FOUNDRY, OLD BURY, NEAR BIRMINGHAM. SOLE PROPRIETORS OF HINTON'S PATENT CUPOLA, WHICH CONSUMES FIFTY PER CENT. LESS COKE than any cupola yet invented. MAKERS OF ALL KINDS OF MACHINERY connected with the GRINDING and TEMPERING of EVERY SORT OF CLAY or MARL, and for the MANUFACTURE OF BRICKS, TILES, DRAIN PIPES, &c. ALSO, of HIGH and LOW PRESSURE STEAM ENGINES of any dimensions, and of GENERAL MACHINERY.

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CORNISH BORER STEEL.—Upwards of ONE HUNDRED AND SIXTY MINES are SUPPLIED with this STEEL, and the DEMAND for it is RAPIDLY INCREASING.—For terms, apply to H. MUSHET and CO., Forest Works, near Coleford, Gloucestershire.

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DIALS WITH THE LATEST IMPROVEMENTS. APPOINTED MAKER OF HEDLEY'S DIAL.

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PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH DAVEY, and PRYOR who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

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WIRE-ROPE TESTING.

PUBLIC TEST OF A. J. HUTCHINGS AND CO.'S PATENT WIRE-ROPE at LIVERPOOL, FEBRUARY 27, 1861.

[From the Daily Post of March 1, 1861.]

On Wednesday, the 27th of February, a series of EXPERIMENTS on WIRE-ROPE took place at the Corporation Testing Works, King's Dock. The specimens tested were manufactured by the well-known firm of A. J. HUTCHINGS and CO., of Millwall, London, the Contractors to the Lords of the Admiralty and various foreign Governments, the character of whose rope is so well known in this country, as well as all parts of the Continent. Capt. Duurst, of H.M.S. Hastings, and a number of other gentlemen connected with shipping, were present to witness the experiments, all of which were considered highly satisfactory, and in every respect sustained the reputation of the manufacturers. The following are the results of the experiments:—

An 8 in. rope bore 70 tons WITHOUT BREAKING.

Circumference and breaking strain.

2½ tons 2½ in. 3 3½ tons 27 tons 29 tons 32½ tons 45½ tons

10½ tons 14 tons 20 tons 27 tons 29 tons 32½ tons 45½ tons

N.B.—The 2½, 3, and 4 in. ropes were the sizes actually tested. The remaining sizes and strains are comparative.

THE ABOVE ROPES ARE FOR COLLIERY USE.

Size. Hutchings and Co.'s wire-rope for ship's rigging. Tested Feb. 27, 1861.

2 5 tons 15 cwtw.

2½ 11 " 14 "

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THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000 Bedford United (copper), Tavistock.	2 8 6.	5 1/2	6 5 1/2	..	12 8 6. 0 1 6	Sept. 1861
240 Boscean (tin), St. Just.	20 10 0.	60	..	..	34 5 0. 1 5 0	Sept. 1861
200 Botallack (tin, copper), St. Just.	91 5 0.	240	..	..	443 5 0. 2 10 0	Feb. 1860
1000 Carn Brea (copper, tin), Illogan.	15 0 0.	80	75 80	..	269 10 0. 2 0 0	Feb. 1861
2618 Carnforth (tin), St. Just.	3 10 0.	134	..	..	9 19 6. 0 2 0 0	Sept. 1860
200 Cefn Cwm Brwyno (lead), Cardiganshire.	83 0 0.	33	..	..	9 0 0. 4 0 0	April. 1861
5000 Connoisseur (copper, sulphur) [L. £1].	1 0 0.	34s. 6d.	34s.	..	0 9. 0. 0 9 0	July. 1860
2460 Cook's Kitchen (copper), Illogan.	17 0 0.	30	..	..	0 13 0. 0 5 0	Sept. 1861
1200 Copper Miners of England.	25 0 0.	25	..	..	7/8 per cent.	Half-yearly.
3000 Ditto ditto (stock).	100 0 0.	24	..	..	1 per cent.	Half-yearly.
1055 Craddock Moon (copper), St. Cleer*.	8 0 0.	25	22 24	..	5 18 0. 0 5 0	Sept. 1861
876 Cwm Erin (lead) Cardiganshire.	7 10 0.	16 1/2	20	..	227 10 0. 0 5 0	Oct. 1861
128 Cwmytwith (lead), Cardiganshire.	60 0 0.	240	..	..	3 8 0. 0 5 0	May. 1861
280 Derwent Mines (sls.-lead), Durham.	300 0 0.	180	..	..	142 0. 0 5 0	June. 1861
1024 Devon Gt. Con. (cop.), Tavistock [S.E.]	1 0 0.	360	..	..	767 0. 0 7 0	Sept. 1861
358 Dolecaeth (copper, tin), Camborne*.	128 17 6.	510	..	..	160 0. 0 5 0	July. 1859
3000 Dyfnugwm (lead), Wales.	12 6 6.	94	..	..	0 2 6. 0 2 0	Sept. 1861
512 East Bassett (cop.), Redruth [S.E.]	29 0 0.	66	65 70	..	90 0. 0 3 0	Sept. 1861
614 East Cardon (copper), St. Cleer [S.E.]	2 14 6.	274	263 27 1/2	..	1 10 0. 0 12 0	Oct. 1861
300 East Darren (lead), Cardiganshire.	18 6 0.	15	13 1/2	13 1/2	1 0 0. 0 10 0	July. 1861
2048 East Wheal Lovell (tin), Wendron.	2 10 0.	—	..	..	0 5 0. 0 5 0	July. 1859
1400 Ewan Mining Co. (lead), Derbyshire.	5 0 0.	—	..	..	20 3 4. 0 10 0	May. 1861
4940 Fowey Consols (copper), Tywardreath.	4 0 0.	5	..	..	41 9. 0. 2 6	June. 1860
2800 Fowke (ld.) [L. £250 pd., 240 £15 pd.].	..	35	..	..	64 12 7. 1 12 0	Sept. 1861
5000 Frank Mills (lead), Devon.	3 18 6.	41	..	..	0 14 0. 0 3 0	Sept. 1861
4000 Great South Tolpuddle [S.E.], Redruth*.	0 14 6.	41 1/2	41 1/2	..	7 13 6. 0 5 0	Feb. 1861
1788 Great Wheal Fortune, Breage.	18 6 0.	15	13 1/2	13 1/2	1 0 0. 0 10 0	July. 1861
5008 Great Wh. Ver. (tin, cop.), Helston [S.E.]	40 0 0.	6	..	..	1 12 6. 0 7 0	Sept. 1861
1024 Herodsfoot (sls.-lead), near Liskeard [S.E.]	8 10 0.	38	33 1/2	34 1/2	1 5 0. 0 15 0	Oct. 1861
1000 Hibernal Mine Company.	92 6 2.	—	..	..	7 10 0. 0 15 0	Sept. 1861
160 Levant (copper, tin), St. Just.	2 10 0.	95	..	..	1691 0. 0 8 0	May. 1860
4000 Liversdale (lead), Cardiganshire, Wales*.	18 15 0.	125	110	..	277 10 0. 2 0 0	Oct. 1861
9000 Markt Valley (copper), Caradon.	4 10 6.	104	10 1/2	10 1/2	1 6 0. 0 5 0	Oct. 1860
5000 Mendip Hills (lead) [L.], Somerset.	3 15 0.	134	..	..	2 1 0. 0 2 0 0	May. 1861
1800 Minera Mining Co. [L.], (d.), Wrexham.	25 0 0.	180	170	..	75 0. 0 4 0	Aug. 1861
7000 Mining Co. of Ireland (cop., lead, coal).	7 0 0.	—	..	..	12 10 0. 2 10 0	Sept. 1861
640 Mount Pleasant, Mold.	4 0 0.	25	..	..	15 5. 0 10 0	Oct. 1861
6000 New Birth Tor and Vulture Consols.	3 6 6.	21	..	..	0 3 6. 0 10 0	Sept. 1861
6000 North Downs (copper) Redruth.	2 3 4.	5 1/2	5 1/2	..	0 2 6. 0 2 0	Aug. 1861
1366 North Grambler, Redruth.	2 7 6.	6	..	..	0 10 0. 0 10 0	Mar. 1861
6000 North Great Work, Breage.	1 3 0.	4 1/2	..	..	0 2 0. 0 2 0	May. 1860
5000 Orsedd (lead), Flintshire.	0 0 8.	134	..	..	0 6 0. 0 10 0	Sept. 1861
6400 Par Consols (cop.), St. Blazey [S.E.]	1 2 6.	94	8 8 1/2	..	36 4 6. 0 5 0	July. 1861
200 Parys Mines (copper), Anglesey [L.]	60 0.	—	..	..	12 10 0. 2 10 0	Sept. 1861
200 Phoenix (copper, tin), Linkinhorne.	100 0.	435	..	..	449 10 0. 65 0	May. 1861
1772 Poldro (tin), St. Agnes.	—	5	..	..	6 9 6. 0 2 5 0	April. 1861
1120 Providence (tin), Uly Lelant [S.E.]	10 6 7.	42	40 42	..	11 12 7. 1 12 0	Sept. 1861
1600 Rosemary.	50 0.	—	..	..	1250 0. 0 100 0	Quarterly.
512 South Caradon (cop.), St. Cleer* [S.E.]	1 5 0.	305	..	..	350 0. 0 5 0	Sept. 1861
512 South Tolpuddle (cop.), Redruth, Cornwall.	8 0 0.	35	38 40	..	102 10 0. 1 0 0	April. 1861
496 South Wheal Frances, Illogan* [S.E.]	18 19 8.	117 1/2	..	..	356 0. 0 1 0	Sept. 1861
280 Spears Moor (tin, copper), St. Just.	31 17 9.	45	..	..	9 15 0. 0 1 0	June. 1861
940 St. Ives Consols (tin), St. Ives*.	8 0 0.	36	30 32 1/2	484	0 0. 0 15 0	May. 1861
9600 Tamar Con. (all.-ld.), Beeralvor [S.E.]	4 10 0.	15	5 6 0.	..	5 6 0. 0 2 0 0	Jan. 1861
6000 Tinctor (cop., tin), Pool, Illogan [S.E.]	9 0 0.	66	63 1/2	61 1/2	10 13 6. 0 5 0	Oct. 1861
6000 Tolvadden (copper), Marazion.	—	21	..	..	0 13 6. 0 3 0	Mar. 1860
572 Trelyon Consols (tin), St. Ives.	11 10 0.	20	..	..	7 0 0. 0 10 0	Sept. 1860
2000 Trumpet Consols (tin), near Helston.	57 10 0.	100	52	0 0. 0 2 0	May. 1861	
1024 Wandon Consols (tin), Wendron.	11 13 10.	16	12 14	..	8 15 0. 0 1 0	Jan. 1861
6000 West Bassett (copper), Illogan [S.E.]	1 10 0.	17	22 0.	0 0. 5	Sept. 1861	
6000 West Burton Gt. Head, Yorkshire.	50 0.	—	..	..	14 10 0. 3 0	June. 1861
1024 West Caradon (cop.), Liskeard [S.E.]	5 0 0.	40	38 40	..	98 11 3. 0 10 0	Sept. 1861
256 West Damself (copper), Gwenman.	37 0.	60	..	..	12 10 0. 2 10 0	Sept. 1861
6000 West Fowey Consols (tin and copper).	7 10 0.	41	..	..	0 14 0. 0 10 0	Sept. 1861
4000 W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0.	325	310 320	..	315 0. 0 7 0	Aug. 1861
512 Wheat Bassett (copper) Illogan* [S.E.]	5 2 6.	96	87 1/2 92 1/2	574 10 0. 2 0 0	Oct. 1861	
256 Wheat Buller (cop.), Redruth* [S.E.]	5 0 0.	80	..	..	929 0. 0 2 0 0	May. 1861
2900 Wh. Clifford Amalgamated (cop.), Gwen. 30 0.	0.	—	..	..	16 0 0. 0 2 0 0	Aug. 1861
2000 Wh. Falmouth and Sperris.	2 5 0.	8	..	..	0 10 0. 0 10 0	Feb. 1861
128 Wh. Friendship (copper), Devon.	50 0.	90	..	..	2400 10 0. 5 0	Feb. 1861
512 Wh. Jane (silver-lead), Kent.	3 10 6.	18	..	..	10 10 0. 1 0 0	Feb. 1860
1024 Wh. Kitty (tin), Uly Lelant [S.E.]	1 7 2.	7	..	..	8 0 0. 0 10 0	Sept. 1860
4800 Wh. Ludeott (lead), St. Ives.	2 10 8.	21	..	..	1 12 0 0. 0 4 0	Oct. 1861
896 Wh. Margaret (tin), Uly [S.E.]	9 17 6.	43	40 42	..	69 0. 0 1 0	Aug. 1861
100 Wh. Mary (tin), Lelant.	36 2 6.	440	..	..	280 5 0. 0 7 0	June. 1860
1024 Wh. Mary Ann (d.), Menheniot [S.E.]	8 0 0.	14	..	..	54 7 6. 0 10 0	Sept. 1861
80 Wh. Owles (tin), St. Just, Cornwall.	70 0.	300	..	..	280 13 0. 5 0	Aug. 1861
5000 Wicklow (copper) [L.], Wicklow.	5 0 0.	55	56	..	43 17 6. 2 0	Oct. 1861

[* Dividends paid every two months. † Dividends paid every three months.]

MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
700 Aberdovey (silver-lead), Merioneth.	1 10 0.	30	..	..	0 10 0. 0 10 0	Mar. 1859
512 Alfred Consols (cop.), Phillack [S.E.]	3 3 6.	4 1/2	4 1 1/2	..	20 3 0. 0 2 6	April. 1859
1674 Baleswidden (tin), St. Just.	11 15 0.	12	12 5 0.	0 5	5 0 0	Jan